# THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES. 1893-4.

THE EDUCATIONAL DIRECTORY

# Columbia College

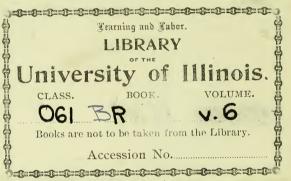
IN THE CITY OF NEW YORK.

COLUMBIA COLLEGE IN THE CITY OF NEW YORK at the present time consists of the School of Arts, the original college, founded in 1754; of sundry professional schools, to wit: the School of Law, the College of Physicians and Surgeons, and the School of Tlines, admission to all of which, as candidates for professional degrees, is open to all students, whether or not they are college-bred men; and of the University Faculties of Law, Indicine, Mines (Applied Science), Political Science, Philosophy and Pure Science, which conduct all courses leading to University degrees of Ilaster of Arts and Doctor of Philosophy.

The point of contact between the college and the university is the senior year in the School of Arts, during which year students in the School of Arts pursue their studies, with the consent of the Faculty of Arts, under one or more of the Univer-

sity Faculties.

The various schools are under the charge of their own faculties and for the



offer advanced courses of study and investigation, respectively, in (a) Private or Municipal Law, (b) Medicine, (c) Applied Science, (d) History, Economics, and Public Law, (e) Philosophy, logy and Letters, and (f) Mathematics and Natural Science. Courses of study under one or more of these University Faculties are open to members of the senior class in the School of Arts and to all students who have successfully pur-sued an equivalent course of under-graduate study to the close of the junior year. These lead, through the Bachelor's Degree, to the university degrees of Master of Arts and Doctor of Philosophy.

Surgeons offers a four years' course in the principles and practice of medicine and surgery, leading to the degree of Doctor of Medicine (M.D.)

The School of Mines, established 3. The School of Mines, established in 1864, offers the following courses of study, each of four years' duration and each leading to an appropriate professional degree, namely, mining engineering, civil engineering, electrical engineering, metallurgy, geology and paleontology, analytical and applied chemistry, architecture; and, as a graduate course of two years' duration and leading to an appropriate degree. and leading to an appropriate degree, sanitary engineering.

SETH LOW, LL.D., President.

### THE

# Packer Collegiate Institute

Foralemon, bet. Clinton and Court Sts.,

BROOKLYN, N. Y.

### A SCHOOL FOR THE THOROUGH TEACHING OF YOUNG WOMEN.

It has Preparatory, Academic and Collegiate courses of study. It offers extended courses in the English Language and Literature, in Ancient and Modern Languages, in Mathematics, in History, in the Natural and Physical Sciences.

During the last six years of the Institute's courses of instruction all teaching is done by specialists.

**Graduates from the Institute** have been admitted to the Junior year at our best colleges for women. A certificate from the Institute secures admission to the Freshman year at Vassar, Smith or Wellesley College without examination.

The Institute has six thousand volumes in its Library of Reference, it has well equipped Laboratories in the Department of Physics. Chemistry, Physiology, and Natural History; it has a Gymnasium abundantly furnished with apparatus under the direction of a competent instructor; it has a spacious Studio for its Classes in Drawing.

An Otis Elevator is used by the students.

A student may be admitted to the Institute at any time when there is a vacant desk in the grade to which she should be assigned.

New students will be classified September 19, 20, 21, 1894.

The second semester will begin February 1, 1895.

The latest catalogue of the Institute will be furnished by mail, upon application to the Register.

TRUMAN J. BACKUS, LL.D.,

President of the Faculty.

# Polytechnic Institute of Brooklyn.

Under its new charter, granted by the Regents, January 30, 1890, the Institute possesses all the rights, powers and dignities of a college.

### INSTITUTE COURSES.

The curriculum provides four separate courses of instruction, each occupying four years, equivalent generally to corresponding courses of other colleges leading to like degrees. These are in outline:

- LIBERAL:—A course in language, literature, history, and philosophy, leading to the degree of Bachelor of Arts.
- ENGINEERING:—A course in mathematics, physics, mechanics and field work, leading to the degree of Bachelor of Science in Engineering.
- 3. **CHEFIICAL**:—A course in mathematics, physics, chemical analysis, and assaying, leading to the degree of *Bachelor of Science* in Chemistry.
- ELECTRICAL:—A course in mathematics, physics, electrical measurements, tests and laboratory practice, leading to the degree of Bachelor of Science in Electricity.

To these will be added after the present year, a post-graduate course of one year upon course 2, leading to the degree of *Civil Engineer*; and one likewise upon course 4, leading to the degree of *Electrical Engineer*.

### EQUIPMENT.

The new Institute, building erected in 1890 at a cost of over a quarter of a million dollars, is designed after the best proved plans of modern educational institutions. It comprises spacious laboratories, chemical and physical; a well-equipped observatory and admirable collection of engineering and surveying instruments; and collections in Geology, Zoölogy, and Paleontology.

THE SPICER LIBRARY, selected during the past year for general reference and study in all departments of the Institute work, is believed not to be excelled by any library of equal size in the country.

THE GYMNASIUM, 100 feet long by 70 wide, is newly completed, and amply equipped with the best appliances for physical exercise and training. It comprises running track, bath, swimming tank, toilet rooms, etc., and is under the direction of a careful and competent director.

### ACADEMIC DEPARTMENT.

The Institute conducts also in an independent building a large academic preparatory school, in which the courses of study are arranged with special reference to the Institute work. This department is completely equipped, and employs a force of over thirty instructors. It prepares students for the higher courses of the Institute, for any of the classical colleges, or in its Commercial Course for a business career.

**CATALOGUES**, containing full information and description, may be had on application.

DAVID H. COOHRAN, Ph D, LL.D.,

# ADELPHI ACADEMY

### FOR BOTH SEXES.

# Preparatory, Academic, Collegiate and Art Departments.

The Collegiate Department has three Courses of Study.

The  ${\it Classical}$   ${\it Course}$  affords thorough preparation for the best American Colleges.

The Literary Course gives liberal training in Languages, ancient and modern, Literature, History, Philosophy, Natural Science, and Mathematics.

The **Scientific Course** gives a thorough and practical knowledge of Physics, including Electricity, Chemistry, Mathematics, Political Economy, History, and a general acquaintance with the Natural History Sciences.

The **Academic Department** gives the essential training of good English education, and two years in Latin, French or German, and a year to each of the following subjects: English Literature, English History, Elementary Algebra; and a half year to Physiology.

The **Preparatory Department** receives pupils at the age of six years, and for three years gives instruction in the elements of reading, writing, spelling, arithmetic, geography, language and drawing.

The **Kindergarten Department** receives children at the age of four years. The rooms for this class are on the lower floor, separate from the other pupils. The instruction given is in accordance with the most approved methods.

The **Art Department** has a spacious studio, with excellent light, furnished with statues, torsos, busts, masks, and reliefs. The Professor in charge meets students once a month for criticism in composition and design.

Physical Training.—Each student receives daily instruction in Calisthenics or Gymnastics, unless excused on account of Physical disability. Three large rooms, occupying in all a space of 200x 50 feet, are devoted to Physical Exercise. They are well lighted and ventilated, and contain apparatus for light and heavy gymnastics. They are in charge of a regularly educated physician. The exercises are numerous and varied, adapted to all ages.

For full particulars as to terms and methods of study apply in person or by letter to the Principal.

# PRATT INSTITUTE,

### RYERSON STREET.

Between DeKalb and Willoughby Avenues,

BROOKLYN, N.Y.

Founded by CHARLES PRATT for the promotion of Art, Science, Literature, Industry, and Thrift.

An Industrial Institute, with Day and Evening Sessions, offering Complete Courses in Art, Science, and Technical Branches.

HIGH SCHOOL.—A three years' course for both sexes, combining drawing and manual work, with the usual studies of a high school or academy.

DEPARTMENT OF FINE ARTS.—Classes in freehand, architectural drawing, clay-modeling, wood-carving, applied design, art needlework; also, regular art course, and normal course for training of teachers. Lecture course.

DEPARTMENT OF DOMESTIC ART.—Classes in sewing, dressmaking, millinery, physical culture. Combined course in Domestic Art and Domestic Science. Lecture course.

DEPARTMENT OF DOMESTIC SCIENCE.—Normal domestic science course, household science, hygiene and home nursing, public hygiene, cookery, laundry. Food economics. Lecture course.

DEPARTMENT OF SCIENCE AND TECHNOLOGY.—Algebra, geometry, mechanical drawing, physics, chemistry, electrical construction, steam and the steam engine, strength of materials, machine design, carpentry, machine work, plumbing, house, sign, and fresco painting. Lecture course.

DEPARTMENT OF KINDERGARTENS.- Training class for teachers. Special classes. Lecture course.

DEPARTMENT OF COMMERCE.—Regular course of phonography, typewriting, bookkeeping, arithmetic, penmanship, English, Spanish, Lectures.

FREE PUBLIC LIBRARY.—Free Library and reading-room. Classes in cataloguing, practical library training, reference work, English and American literature.

MUSEUMS.—Collections of inorganic substances, ceramics, glass, building and decorative stones, reproductive processes, organic compounds, textile fabrics, art products.

THE THRIFT.—Deposit, savings, and loan branches, the privileges of which are open to the public.

For further information, or for application blanks, apply at the General Office of the Institute, Ryerson Street.

#### THE

### "BRYANT & STRATTON"

INTERNATIONAL CO-OPERATIVE

### BUSINESS EDUCATION.

Colleges located in Brooklyn, New York, Philadelphia, Chicago, New Orleans, St. Louis, Albany, Buffalo, Trenton, Washington, Portland, Utica, Detroit, St. Paul, Springfield, Montreal, Toronto, Davenport, Boston, Baltimore, Cincinnati, Milwaukee, Cleveland, San Francisco, Rochester, Troy, Syracuse, Nashville, Louisville, Poria, Burlington, Providence, Newark, Meadville, Kansas City,

Endorsed by Educators and Business Men throughout the Country,

## The Bryant & Stratton Business College Association.

This organization is the outgrowth of the chain of Business Colleges established by Messrs. Bryant & Stratton in all the larger cities of the United States and Canada. The course of study pursued is arranged by the principals of the several colleges, and is peculiar to these institutions. Thus each college secures the benefit of the combined intelligence and experience of the other colleges.

Efficiency is secured by the continual interchange of business papers between the students of the various colleges in carrying on the *Practice of* 

Business.

This business consists of transactions carried on through the mail between the students in attendance at the different colleges. Orders for goods and shipments of merchandise are exchanged by students as wide apart as from Maine to California. The merchandise bought and sold at the market quotations is represented by printed tickets, showing the number of bushels of corn, oats, wheat or rye, or pounds of wool or cotton, yards of each size.

cloth, etc.

These transactions necessitate the establishment in each college of a transportation office, and importing and jobbing house, a commission house, a bank and an agency bureau, all equipped with complete sets of books and business papers. Each student, becoming to all intents and purposes a business man, regards himself as such, and carries on various kinds of business on his own account, or in partnership, in turn occupying the different positions in the bank, commission or other houses, learns to keep the books, draw all the papers, and to make rapidly all the necessary calculations.

### BROOKLYN "BRYANT & STRATTON" BUSINESS COLLEGE, 38, 40, 42 and 44 COURT STREET.

Principal and Proprietor. C. CLAGHORN. -

# FROEBEL ACADEMY,

### 686 LAFAYETTE AVENUE,

OPPOSITE TOMPKINS PARK.

BROOKLYN, N. Y.

An Ideal School for the Training of Boys and Girls from Four to Fourteen Years of Age.

### COURSE, TEN YEARS.

KINDERGARTEN, . TWO YEARS. PRIMARY, . . . FOUR YEARS. ACADEMIC, . . . FOUR YEARS.

The aim of the School is to continue, through the advanced classes, the individual development begun in the Kindergarten, and to unify the whole work, so that Kindergarten principles shall underlie all grades.

Terms begin September 26, November 28, January 30, and April 10.

Rates from \$10 to \$24 per term.

Convenient to Tompkins, De Kalb, Nostrand, and Gates avenues car lines.

Catalogues on application.

MISS CAROLINE W. HOTCHKISS,

Principal.

# The Brooklyn Institute

# Arts and Sciences.

FOUNDED 1824.

REORGANIZED 1800.

The Institute contains the following Departments or Societies of Associate Members.

I. A	Anthropology.	10.	Entomology.	19.	Painting.
2.	Archæology.	II.	Fine Arts.	20.	Pedagogy.
3	Architecture,	12.	Geography.	21.	Philology.
4.	Astronomy.	13.	Geology.	22.	Photography.

5. Botany.

14. Law. 15. Mathematics.

23. Physics. 24. Political Science.

7. Domestic Science, 16. Microscopy. 8. Electricity.

17. Mineralogy.

25. Psychology. 26. Sculpture.

q. Engineering.

6. Chemistry.

18. Music.

27. Zoölogy.

COURSES OF LECTURES on every branch of Art, Science, Literature, and History. Forty-five courses of lectures, and three hundred lectures, open to all members.

PUBLIC ANNIVERSARY ADDRESSES on days of National and Local Interest.

COURSES OF CONCERTS AND DRAMATIC READINGS given from October to June.

LIBRARY OF THE ARTS AND SCIENCES. 15,000 volumes.

COLLECTIONS in each Department of Science and Art.

ANNUAL EXHIBITIONS of Collections in Geography, Geology, Mineralogy, Architecture, Electricity, Photography, etc., by the Departments.

### An Associate Member of the Institute is entitled

Admission for himself and one other person to all the Anniversary Meetings, Public Addresses, and General Lectures of the Institute.
 Admission for himself and one other person to Evening Lectures before

Admission for himself and one oner person to Evening Eccurics of the Institute and its Departments.
 Admission for himself or a friend to Afternoon Lectures.
 Admission for himself and family to all the Receptions and Exhibitions given by the Institute and its Departments.
 To the Use of the Library and Collections of the Institute and to the privileges of Membership in the several Departments.

### The Initiation Fee is \$5.00, and the Annual Dues are \$5.00.

A Copy of the Year-Book and the Prospectus of the Institute may be obtained at the office, 502 Fulton St., or will be mailed on the receipt of the postage, to cents. For further information address,

FRANKLIN W. HOOPER, Director,

\_\_\_\_\_ THE \_\_\_\_

## BROOKLYN ART ASSOCIATION,

A SOCIETY FOR THE

# Advancement of the Fine Arts.

FOUNDED 1864.

ART GALLERY, STUDIO, AND RECEPTION ROOMS,

### 172-174 MONTAGUE STREET.

### COURSES OF LECTURES

on the History, Theory, and Technique of Painting, Sculpture, Etching, Engravings, Decorative Art and Architecture.

### COURSES OF LECTURES

on the Contemporary Art of American and European Countries.

### ANNUAL EXHIBITIONS

of the works of American and European Artists.

### THE BROOKLYN SCHOOL OF FINE ARTS

is conducted by the Association on the basis of the Art Students' League, New York.

### THE BROOKLYN ARCHITECTURAL SCHOOL

for Architects and Draughtsmen.

The Annual Subscription of **Five Dollars** entitles the subscriber to admission for two persons to each lecture, reception, and exhibition, and to all the privileges of the Association, save instruction in the Art School.

For further information address Prof. Franklin W. Hooper, Secretary of the Executive Committee, 174 Montague Street.

CARLL H. DE SILVER, Secretary.

### TME

# BROOKLYN LIBRARY

AND

# READING ROOMS,

### 197 Montague Street, near Court Street.

### 1 1 1

The Library now contains over 117,000 volumes, and is increasing at the rate of 4,000 volumes a year.

The best new books are put in circulation as soon as published.

The Reference Department, for purposes of study and research, has 1,200 volumes, encyclopædias, etc., directly accessible.

Spacious Reading Room, with 300 newspapers and periodicals on file, and 3,000 selected volumes, for the use of members in this room.

\* \* \*

PRICE OF MEMBERSHIP, \$5.00 A YEAR.

TME

# Brooklyn Art School

### BROOKLYN ART ASSOCIATION,

WITH THE CO-OPERATION OF THE

### Department of Painting of the Brooklyn Institute.

THE OVINGTON BUILDING, 246 Fulton St., cor. of Clark St.

#### INSTRUCTORS.

WALTER SHIRLAW, -		-		_		-	Life	and Composition Classes
WILLIAM M. CHASE,	-		-		-		-	- Painting Classes
J. MASSEY RHIND, -		-		-		-	-	Modeling and Sculpture
JOSEPH H. BOSTON, -	-		-		-		-	Antique Classes
Miss Elizabeth R. Cofi	FIN,	-		-		-	-	Classes in Perspective
WILLIAM H. SNYDER,	-		-		-		-	Curator

#### LECTURERS.

Prof. WILLIAM H. GOODYEAR, - - - - History of Art
Miss Louise Both-Hendriksen, - - 18th and 19th Century Art

### CALENDAR.

First Quarter, October 1st to December 1st.

Second Quarter, December 1st to February 1st.

Third Quarter, February 1st to April 1st.

Fourth Quarter, April 1st to June 1st.

Students are admitted at any time.

DAY CLASSES IN

THE OVINGTON STUDIO BUILDING,

246 Fulton Street, -- near Clark Street.

EVENING CLASSES IN

THE ART ASSOCIATION BUILDING,

174 Montague Street.

The School is conducted on the basis of the Art Students' League, New York. For Circulars and further information, inquire of Mr. WILLIAM H. SNYDER, at 246 Fulton Street, from 9.A.M. to 5 P.M.

# The Architectural School,

CONDUCTED BY THE

### DEPARTMENT OF ARCHITECTURE,

OF THE

### Brooklyn Institute of Arts and Sciences.

This school is established for the purpose of providing the very best facilities for advanced instruction to young architects, draughtsmen, and others who desire to become proficient in architectural drawing and kindred subjects. The instruction given is for the most part not taught in other schools, and has special application to office work.

The rooms occupied by the school are at 174 Montague Street, in the Art Association Building. The sessions are during the first five evenings of each week, and attendance-is required at least three evenings each week.

Mr. JOHN W. McKECHNIE, of the Metropolitan Museum, will give the instruction in General Architectural Drawing, Shades and Shadows, Perspective and Graphic Statics.

Mr. JOSEPH H. BOSTON, of the Brooklyn Art School, will give the instruction in Free Hand Drawing, Drawing from Architectural Models, Ornaments, and the Antique, and Water Coloring of Perspective Drawings.

Prof. WILLIAM H. GOODYEAR, of the Brooklyn Institute, Prof. A. D. F. HAMLIN, of Columbia College, and leading Architects will give courses of Lectures on Architectural Design and Construction.

Instruction in Algebra, Geometry, and Stereotomy by competent Instructors.

The season begins on the third Monday in October, and ends on the last Thursday in April. Four evenings of each week are given exclusively to Drawing, Shading, and Coloring. Friday evenings are given to Lectures on Architecture.

## The Tuition is \$8.00 for a Half Year, and \$15.00 for the Full Course of Twenty-six Weeks.

For further information or application blanks address Mr. John W. McKechnie, to Mr. Joseph H. Boston, 174 Montague Street, or to Prof. Franklin W. Hooper, 502 Fulton Street.

.... THE ....

# SCHOOL OF POLITICAL SCIENCE,

CONDUCTED BY THE

# DEPARTMENT OF POLITICAL SCIENCE OF THE

### BROOKLYN INSTITUTE OF ARTS AND SCIENCES.

Office, 502 Fulton Street.

### COURSES OF INSTRUCTION.

#### 1. Government.

Civil Government of the United States. The History of American Politics. The Political Institutions of Foreign Countries.

### 2. Political Economy.

Elements of Political Economy. Advanced Course in Political Economy. Practical Problems in Political Science.

### 3. History.

American History. European History. History of Civilization.

### 4. Sociology.

The Duties of Citizenship.
The Duties of the State to Dependent Classes.
The Nature of the True Republic.

The instruction in the above courses will begin on the third Monday in October and continue until May 1st.

Courses of Lectures on Political and Historical Subjects by Prof. John Fiske, Hon. William Everett, Dr. John C. Brooks, and others, will be given during the year 1894-5.

Dr. Lewis G. Janes will conduct the classes in Civil Government, Dr. Charles H. J. Douglas those in Political Economy, and Prof. A. K. Alden those in History.

The courses are intended for adults, or those past the school and college age.

For terms and further information, address

FRANKLIN W. HOOPER,

Director, Brooklyn Institute.

### THE

# INSTITUTE EXTENSION LECTURES

CONDUCTED BY THE

### Brooklyn Institute of Arts and Sciences,

ON THE

### "UNIVERSITY EXTENSION PLAN."

Office, 502 Fulton Street.

HE Institute will conduct a large number of courses of lectures during the coming season on the so-called "University Extension Plan." Arrangements for courses in History, Political Economy, Philosophy and Psychology; in Architecture, Sculpture, Painting, Music and Literature; and in Astronomy, Geology, Archaeology, Geography, Botany, and other kindred subjects may be made with the Institute. These lectures may be given in the rooms occupied by the Institute, or at any convenient point in Brooklyn and vicinity.

The Institute Extension Lectures will be accompanied by conferences, either preceding or following each lecture, by very full directions for reading and study, and by examinations and certificates at the option of those who take the lectures.

The Institute employs a very large number of lecturers, and is prepared to extend its work to meet the needs of people residing in every section of the city.

For circulars and information concerning the above courses, apply at the Office of the Institute, 502 Fulton Street, Brooklyn, by letter or in person.

# The Biological Laboratory,

LOCATED AT

COLD SPRING HARBOR, LONG ISLAND,

CONDUCTED BY

# THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES.

In the Season of 1895, the Laboratory will be open from Tuesday, June 25th, until Thursday, September 14th, for specialists.

The Regular Session will open on Monday, July 8th, and close on Thursday, August 24th.

### COURSES OF INSTRUCTION.

- 1. Comparative Embryology.
- 2. Bacteriology.
- 3. Advanced Course in Cryptogamic Botany.
- 4. General Course in Zoology.
- 5. General Course in Phænogamic Botany.

Private Laboratories for Specialists and Advanced Students.

For further information inquire of Prof. Herbert W. Conn, Ph.D., Director of the Laboratory, or of Prof. Franklin W. Hooper, Secretary of the Board of Managers. Address, 502 Fulton St., Brooklyn, N. Y.

### THE SHINNECOCK HILLS

# Summer School of Art

WITH THE CO-OPERATION OF

### THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES.



This school is established for the purpose of affording the very best facilities to students and artists for the study of Art at moderate rates during the summer months, in the open air and by the seashore.

The school is under the direction of Mr. William M. Chase, President of the Society of American Artists, Instructor in Painting in the Brooklyn Art School and the Art Students' League. Mr. Chase will give two days each week to instruction, the class working in the meantime daily under his direction.

A Preparatory Class, composed of less advanced students, will be instructed by Miss Lydia Field Emmet, under the supervision of Mr. Chase.

The school is located at Southampton, Long Island, and is open from June 1st to October 1st each year. Accommodations for students may be had at the Shinnecock Inn and neighboring farmhouses, where board may be had at from \$6 to \$7 per week.

For further information, apply to

### SECRETARY OF SHINNECOCK HILLS SUMMER SCHOOL OF ART,

Care of ART STUDENTS' LEAGUE,

WEST 57TH STREET, NEW YORK CITY.

# THE CATSKILL SUMMER SCHOOL OF ART

OF THE

## Brooklyn Institute of Arts and Sciences,

SEASON OF 1895.

In order to provide the best instruction in Art during the Summer months at moderate rates, and also to afford the facilities for studying with competent instructors in a mountainous or hilly country, the Catskill Summer School of Art has been established.

The advanced classes in Painting will be under the direction of Mr. Theodore Robinson, of New York, and the beginning classes under the instruction of Miss Harriet S. Peck, of the Brooklyn Art School.

The Tuition for the Advanced Classes is \$15.00 for the term, and for the Preparatory Classes, \$10,00, payable in advance.

The School is located each year at some advantageous point where excellent subjects for study are abundant.

The School will open Monday, July 8th, and close Thursday, August 31st. Students will be admitted at any time. Mr. Robinson will give his first criticism on Monday, July 8th.

For further information inquire of

MISS HARRIET S. PECK,

100 Willow St., Brooklyn, N. Y.

# THE OLD LYME

# SUMMER SCHOOL OF ART

CONNECTED WITH

### THE BROOKLYN ART SCHOOL.

### SEASON OF 1895.

The object of this School is to provide students with the opportunity of continuing the study of art during the summer months.

The School is located at Old Lyme, Conn., near the Sound and at the mouth of the Connecticut River.

Will open June 19th, and continue throughout the summer.

TERMS: (Payable in Advance.)
Per Month.

Landscape and Figure Class, - \$15 00

Preparatory Class, - - 8 00

The Preparatory Class is devoted to the study of Casts and Still Life. Both classes will be under the direction of Mr. Boston, who will give two criticisms a week.

Accommodations for students may be had in the town, and at the "Pierpont House." Board, \$6.00 to \$8.00 per week.

There are also some large and some smaller houses, unfurnished, or elegantly furnished, which can be rented.

For further particulars, address Mr. Boston, or call at his Studio, 203 Montague Street, Brooklyn, N. Y.

#### \_\_\_THE \_\_\_

# Photographic Department

OF THE

### BROOKLYN INSTITUTE OF ARTS AND SCIENCES,

Rooms at 201 Montague Street.

The Department occupies a suite of rooms at 201 Montague Street, next door to the Brooklyn Library, for the exclusive use of its members. The suite includes a large Studio Room, 25 x 32 feet, which is provided with a good skylight, 10 x 14 feet, and is excellently adapted for Studio Photography; a Dark Room, provided with all the accessories necessary for the development of photographs, and an Enlarging Room, with good north light. The rooms contain very many appliances adapted to the best work in photography, and are open from 8 A.M. until 10 P.M. each week day.

Exhibits of lantern slides and other photographic work of members of the Department will be given in the Studio Room on the first and third Wednesday evenings of each month. Informal Meetings for the comparison of results and the discussion of matters of technical, scientific or artistic interest will be held on the second and fourth Wednesday evenings of each month. The members meet on the fourth Monday of each month, in the large Lecture Room of the Institute, for the purpose of listening to illustrated lectures on subjects relating to the scientific and artistic phases of photography,

The Fifth Annual Exhibition of the Photographic Work of the Members of the Department will be held in the Art Gallery of the Brooklyn Art Association in May, 1895.

**Excursions** to points of historic, scientific or picturesque interest are made on Saturdays and legal holidays by members.

An Experienced Photographer will be present at the rooms every day.

**Instruction** by Experienced Photographers will be given in several branches of Photography to classes of ten or more members.

For further information inquire of

Dr. LEWIS E. MEEKER, Curator, 201 Montague Street.

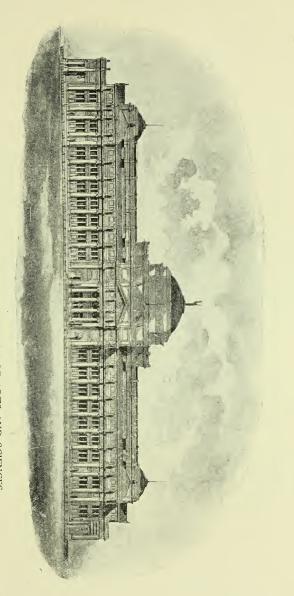
# THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES.

1893-94.

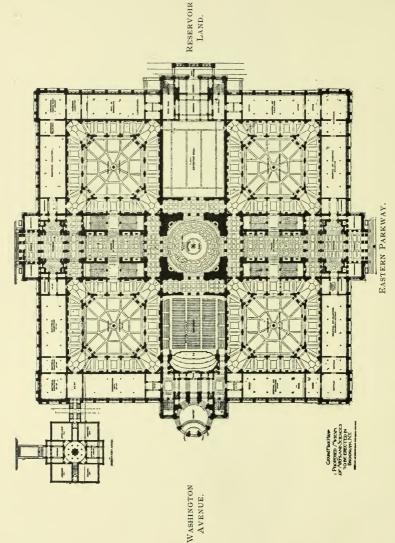
"Promote as an object of primary importance institutions for the increase and diffusion of knowledge."

GEORGE WASHINGTON,

In his Farewell Address.



NORTH FAÇADE OF THE BROOKLYN MUSEUM OF ARTS AND SCIENCES. TO BE ERECTED IN INSTITUTE PARK, FACING THE EASTERN PARKWAY.



FIRST FLOOR PLAN OF THE BROOKLYN MUSEUM OF ARTS AND SCIENCES.

THE

# SIXTH YEAR BOOK

OF

# THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES.

FOUNDED 1824.

RECHARTERED 1890.

1894.

CONTAINING

THE NAMES OF THE OFFICERS AND MEMBERS, COPIES OF THE CONSTITUTION AND BY-LAWS, A BRIEF HISTORY OF THE INSTITUTE, AN ACCOUNT OF THE WORK OF 1893-4, AND A COPY OF THE CHARTER.

"For the People, by the People."

BROOKLYN:
PUBLISHED BY THE INSTITUTE.
1804.

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RICHARD M. UPJOHN. Mrs. WILLIAM E. UPTEGROVE. WILLIAM E. UPTEGROVE. WILLIAM J. URBAN. Miss M. A. Urell. Prescott Vail. Ph.D. LAURENCE B. VALK. Col. Benjamin E. Valentine. Miss M. C. VALENTINE. STEPHEN VALENTINE. Miss Jennie Van Blankensteyn FRANCIS C. VAN BOSKERCH. Miss Jessie Van Brunt. JAMES A. VAN CLEVE. Hon. Joshua M. Van Cott. E. W. VANDERBILT. TAMES O. VANDERBILT. Mrs. M. E. Vandercook. Miss Kate Vanderveer. Frank Van Deverg. P. H. VAN DER WEYDE, Ph.D. Mrs. James Van Dyke. Miss Mary E. Van Everen. P. H. VAN EVEREN. F. H. VAN HOESEN. F. D. VAN HOUTEN. Miss NETTIE L. VAN HOUTEN. D. W. VAN INGEN. Miss Augusta Van Nostrand. Miss Jennie Van Nostrand. Miss Louisa B. Van Nostrand. HENRY D. VAN ORDEN. LE GRAND VAN VALKENBURGH. WILLIS VAN VALKENBURGH. Miss Carrie A. Van Wickle. Miss A. A. VAUPEL. Mrs. THOMAS VERNON. Miss Nathalie L. Vidaud. Prof. A. LAURENT DE VILLEROY.

Prin. WM. T. VLYMEN, Ph. D. WALTER VOEGE. JOHN H. VOGT. Prof. E. R. Von Nardroff. Miss Minna Von Nostitz. Miss Grace C. Voorhees. JUDAH B. VOORHEES. Miss Matilda P. Vosseler. Mrs. Kate P. Vrooman. WILLIAM D. WADE. Prof. Arthur C. Wadsworth. WEDWORTH WADSWORTH. MISS LAURA B. WAGER. Arnold H. Wagner. EMIL F. WAGNER. ERSKINE L. WAIT. HENRY L. WAITE. MISS LILLIAN C. WAKEMAN. Mrs. George E. Walbridge. HOWARD T. WALDEN. Miss S. S. Walden. EDWARD H. WALDO. Miss S. E. Waldo. Miss Alma E. Wales. ADAM WALKER. Miss Florence Walker. JAMES WALKER. Miss Jeannette Walker. JEROME WALKER, M.D. Miss LAVINIA H. WALKER. Mrs. Robert S. Walker. Miss J. Florence Walford. Miss Florence K. Wallace. JAMES P. WALLACE. WILLIAM H. WALLACE. WILLIAM H. WALLACE. Mrs. Harriet A. Walsh. Miss Genevive Walsh. [M.A. Asso. Supt. John H. Walsh, August Walther. Miss Emma L. Walton. C. W. WAPLER. FREDERICK J. WARBURTON. Miss ALICE WARBURTON. EDWARD G. WARD. Miss Martha W. Ward. SIDNEY WARD. HENRY L. WARDWELL. Prof. WM. R. WARE. A. G. WARNER, M.D. BENJAMIN J. WARNER. EDWIN G. WARNER. Miss Emma L. Warner. Miss Helen E. Warner. Miss Mary L. Warner. Mrs. H. S. WARNER. CHARLES E. WARREN. GEORGE WARREN. Miss Susan K. Warren. WM. H. WARREN, Ph.D. Frank Washbourne. Mrs. S. E. V. WATERMAN. HORACE WATERS. W. WATERWORTH, M.D. Miss JESSIE K. WATSON. MISS MARY E. WATSON. Miss Sarah G. Watson. A. J. WATT, M.D. CARLOS L. WATT. Miss Selina F. Watt. JAMES E. WATT. B. G. WAY. F. H. WAY. Miss Mary J. Way. Miss Emma L. Weaver. JAMES E. WEBB. SILAS D. WEBB. E. G. WEBSTER.

Miss Mary D. Webster. R. P. S. WEBSTER. Prof. WARREN T. WEBSTER. WILLIAM R. WEBSTER. WILLIAM R. WEBSTER, Ir. Hon. George L. WEED. MARCUS A. WEED. George F. Weedon. ARCHIBALD C. WEEKS. Mrs. Chas. P. Weeks. Miss Helen M. Weeks. Miss JEANETTE D. WEEKS. WILLET WEEKS. Rev. HERBERT WELCH. DEWITT C. WELD, Ir. WALTER WELLINGTON. Miss Annis R. Wells. EDWARD E. WELLS. HENRY P. WELLS. JOHN J. WELLS. N. DANA WELLS. PIERSON L. WELLS. THOMAS G. WELLS. Mrs. Wheaton A. Welsh. CHARLES WENGENFOHR. Miss Joanetta Wengenroth. EDWARD WENNSTRÖM. Prof. E. E. WENTWORTH. HENRY WENZEL, Ir. CHARLES WERNER. GEORGE WERRENRATH. CHAS. E. WEST, LL.D. FRANK E. WEST, M.D. G. R. Westbrook, M.D. Miss Mary D. Whaley. GEORGE S. WHEELER. HAYDEN W. WHEELER. A. D. Wheelock. Miss Laura T. Wheelock.

EDWARD F. WHELAN. Prof. G. M. WHICHER. George H. Whitbeck. Alexander M. White. Ir. ALFRED T. WHITE. Miss Anna White. Miss Bessie R. White. EDWARD WHITE. Mrs. EDWARD WHITE. Miss Frances E. White. FRANCIS L. WHITE. GEORGE W. WHITE. HAROLD T. WHITE. Miss HARRIET H. WHITE. TAMES WHITE. JOSIAH J. WHITE. Miss Katharine Lyman White. ROGER S. WHITE. Hon. S. V. WHITE. Mrs. S. V. WHITE. STANFORD WHITE. WILLIAM AUGUSTUS WHITE. Mrs. JENNIE A. WHITCOMB. Mrs. Isabella S. Whitin. Miss TILLIE M. WHITING. Miss E. E. Whitney. HENRY N. WHITNEY. HOWARD WHITTLESEY. TAMES WHITTON. F. W. WICHT. Miss Caroline M. Wiggins. JAMES E. WIGHT. PERCY L. WIGHT. Miss Anna M. Wilbur. Miss Elizabeth A. Wilckens. Miss Francesca Wilckens. MARTIN H. WILCKENS. STEPHEN WILCOX. DANIEL G. WILD.

Mrs. Mary A. Wilder. Miss M. D. Whilhelm. Miss Marian Wilkins. Mrs. H. B. WILKINS. Miss Susan H. Wilkins. FRANK A. WILLARD. STEPHEN T. WILLETS. ARTHUR P. WILLIAMS. Mrs. Edgar Williams. EDWARD W. WILLIAMS. Miss Emma A. Williams. H. Brainerd Williams. Miss H. L. WILLIAMS. JAMES H. WILLIAMS. Mrs. Joseph P. Williams. Miss L. E. WILLIAMS. Miss Maria L. Williams. Rev. RICHARD R. WILLIAMS. CHARLES R. WILLIAMSON. Mrs. M. H. WILLIAMSON. E. J. WILLINGALE. HARRISON WILLIS, Jr., M.D. C. L. WILLISTON. Miss Annie F. Wilson. Miss C. A. Wilson. Miss Edith M. Wilson. J. HOWARD WILSON. WILLIAM WILSON. Miss Zada Wilson. HENRY T. WING. GEORGE W. WINGATE. GEORGE E. WINSLOW. JOHN WINSLOW. Miss Julia E. Winslow. Mrs. Rosetta L. Winter. Miss Elise Winters. J. P. WINTRINGHAM. WILLIAM T. WINTRINGHAM.

JOSEPH W. WILDE.

Mrs. J. A. Wisner. JOSEPH V. WITHERBEE. Miss Clementine D. Witte. HENRY DE WITTE. THEODORE S. WOLF. CORNELIUS D. WOOD. HENRY A. WOOD. J. HENRY WOOD. JAMES WOOD, M.D. JOHN W. WOOD. Samuel A. Wood. WALTER C. WOOD, M.D. CHARLES L. WOODBRIDGE. J. LESTER WOODBRIDGE. DANIEL T. WOODBURY. CALEB S. WOODHULL. HENRY S. WOODMAN. R. HUNTINGTON WOODMAN. Charles P. Woodruff. Miss E. B. Woodruff. Miss Harriet S. Woodruff. J. T. WOODRUFF. Miss S. F. Woodruff. TIMOTHY L. WOODRUFF. Miss S. F. Woodruff. Miss Emma D. Woods. Prof. Benjamin D. Woodward. Gen. John B. Woodward. Miss Maria Woodward. ROBERT B. WOODWARD. ROBINS B. WOODWARD. GEORGE WOODWORTH. U. S. Woolley, M.D. LLWELLYN A. WRAY. Mrs. David F. Wright. Mrs. E. S. Wright. Edgar J. Wright. Mrs. J. N. WRIGHT. JONATHAN WRIGHT, M.D.

Miss Mary J. Wright.
Frederick J. Wulling.
F. W. Wunderlich, M.D.
George W. Wundram.
Miss Marie Wundram.
Miss A. E. Wyckoff.
Miss Julia Wyckoff.
William O. Wyckoff.
Miss M. L. Wykes.
Miss Ella M. Wyman.
Mrs. John Eugene Wyman.
A. M. Yarrington.
C. S. Yerbury.

EDGAR W. YOUMANS, Jr. Miss Anna J. YOUNG. Miss Anna L. YOUNG. C. C. YOUNG. JOHN L. YOUNG. MISS LOTTIE E. YOUNG. RICHARD YOUNG. WALTER H. YOUNG. MISS A. B. YOUNGS. Rev. J. L. ZABRISKIE. HENRY ZICK. WILLIAM ZIEGLER. WILLIAM H. ZIEGLER.

## In Ademoriam.

Honorary Members.				
DECEASED.				
JOHN TYNDALL, Dec. 4, 1893.				
WILLIAM DWIGHT WHITNEY, June 7, 1894.				
Corresponding Member.				
George Makepeace Towle, August 9, 1893.				
LIFE MEMBERS.				
Frederick E. Parsons, August 23, 1893.				
THOMAS VERNON, October 6, "				
Wilhelm Jülich, November 8, "				
Wallace E. Blackford, December 11, "				
Elias Lewis, Jr., February 3, 1894.				
Robert Foster, March 6, "				
HENRY P. MORGAN, April 7, "				
A. Warren				
Associate Members.				
ISRAEL MINOR, Jr., June 13, 1893.				
Demas Strong, November 9, "				
WILLIAM H. DOUGLAS, " II, "				
CALEB CUSHING ADAMS, December 13, "				
WILLIAM M. DACKERMAN, " 15, "				
WILLIAM RICHARDSON, " 31, "				
Edmund Blunt, January 24, 1894.				
Frank Greenland, February 28, "				
Charles Corey, April 4, "				
HENRY W. SLOCUM, " 14, "				
Edward B. Bartlett, May 24, "				
JEROME ALLEN, " 26, "				

#### A BRIEF HISTORY

OF

# THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES.

In the Summer of 1823 several gentlemen, among whom was Augustus Graham, met at Stevenson's Tavern for the purpose of establishing for the apprentices of Brooklyn a Free Library. They adopted a constitution, and issued to the citizens of Brooklyn a circular, in which they solicited donations of books and money with which to effect their purpose. On November 20, 1824, they were incorporated by the Legislature of the State under the name of The Brooklyn Apprentices' Library Association, and on July 4, 1825, the cornerstone of the first building owned by the Association was laid by General Lafayette, at the junction of Henry and Cranberry streets. As early as 1835 the Association had outgrown its original quarters, and, the property having been sold to the city, the Institution was removed to a new building in Washington street, then the centre of the wealth and culture of our young city. The first lecture delivered in the newly completed structure was by Professor James D. Dana.

In order to broaden the scope of the Association, an amended charter was granted by the Legislature in 1843, and the name therein changed to that of the Brooklyn Institute. For many years thereafter the

Institute was a most important factor in the social, literary, scientific and educational life of Brooklyn. Its library had a large circulation; its public hall was the scene of many historic and social gatherings, and from its platform were heard such eminent scientific men as Agassiz, Dana, Gray, Henry, Morse, Mitchell, Torrey, Guyot and Cooke; such learned divines as Doctors McCosh, Hitchcock, Storrs and Buddington, and such defenders of the liberties of the people as Phillips, Sumner, Garrison, Emerson, Everett, Curtis, King, Bellows, Chapin and Beecher.

During this brilliant period of its history (1843-1867), the Institute received from Mr. Graham two very important donations. On July 4, 1848, the building, which had been heavily mortgaged, he presented to the Trustees free from all encumbrance, and through his will, made known to the Board of Directors on November 28th, 1851, shortly after his decease, he bequeathed to the Institute the sum of \$27,000 as a permanent endowment fund. The will directs that the interest of \$10,000 of this sum shall be used in the support of lectures on scientific subjects and in the purchase of apparatus and collections illustrating the sciences; that the interest of \$12,000 shall be used in the support of Sunday evening lectures on "The Power, Wisdom and Goodness of God as manifested in His works," and that the balance of \$5,000 shall be used in the support of a School of Design and in forming a Gallery of Fine Arts

For several years, however, prior to 1867, owing to the erection of the Academy of Music and other public buildings, the Institute building was regarded as behind



OLD WASHINGTON STREET BUILDING, OCCUPIED 1835-1891.



the times. The income from the rental of portions of the building was dwindling to a low figure, and the financial support of the free library was becoming inadequate. Under these circumstances the Directors remodeled the building in 1867, at an expense of about \$30,000, a part of which was raised by Life Membership Subscriptions of \$50 and \$100, and the balance by a mortgage on the building. For twenty years (1867-87) this indebtedness necessitated the application of a portion of the income from the rent of the building and from the Graham Endowment Fund to the payment of the interest and the principal of the debt. Final payment on the mortgage was made early in 1887.

The causes of the partial inactivity of the Institute during the twenty years (1867-87) are, therefore, apparent. The most that it was able to do was to circulate its library, keep up its classes in drawing, and provide for the annual addresses on the 22d of February. Freed from debt in 1887 the Institute was enabled once more to use the whole income from its funds and building for educational purposes, and to become once more an important agent in the work of education in the city.

The property of the Institute in 1887 consisted of the Institute building and land, valued at \$90,000, a library of 12,000 volumes, a collection of paintings valued at \$10,000, and Endowment Funds of \$46,000. These last comprise the \$27,000 bequeathed by Mr. Graham, the William H. Cary Fund of \$10,000 for the support of the library, and an increment of \$9,000 realized through premiums on the sale of bonds.

#### 1887-8.

During the year 1887-8 a new era in the history of the Institute was inaugurated. The Board of Trustees determined to make the property of the Institute the nucleus of a broad and comprehensive institution for the advancement of science and art, and its membership a large and active association, laboring not only for the advancement of knowledge, but also for the education of the people through lectures and collections in art and science. It was observed that while Boston has the Lowell Institute, a Society of Natural History and an Art Museum; while Philadelphia has the Franklin Institute, an Academy of Sciences and a Gallery of Fine Arts, and New York has the Metropolitan Museum and the American Museum, vet that Brooklyn has nothing corresponding to these institutions. It was felt that Brooklyn should have an Institute of Arts and Sciences worthy of her wealth, her position, her culture and her people; that it was her duty to do more than she was then doing for the education and enjoyment of her people, and that some step should be taken looking towards the future growth and needs of the city in matters of art and science.

Accordingly, a form of organization was adopted which contemplated the formation of a large association of members, and a continual increase of the Endowment Funds and the Collections of the Institute. Provision was made for a subdivision of the membership into departments, representing various branches of Art and Science, each department forming a society by itself and yet enjoying all the privileges of the general

association. A general invitation was extended to citizens specially interested in Science and Art to become members of the Institute. Courses of lectures on Science and Art were provided. The Directors' Room of the Institute was enlarged to accommodate the meetings of some of the departments contemplated, and a large Lecture Room on the third floor of the Institute Building was fitted up at an expense of \$2,600 for the occupancy of those departments that would make use of apparatus and collections at their meetings.

#### 1888-g.

During the first fifteen months after the reorganization of the Institute a membership of three hundred and fifty persons was recorded. The Brooklyn Microscopical Society joined the Institute in a body with sixty-four members, and became the Department of Microscopy. The American Astronomical Society, whose members resided mostly in New York and Brooklyn, became the Department of Astronomy, with thirty-two members. The Brooklyn Entomological Society united with the Institute, and became the Entomological Department, with forty-one members. The Linden Camera Club of Brooklyn became the Department of Photography, with twenty-six members. Departments of Physics, Chemistry, Botany, Mineralogy, Geology, Zoölogy and Archæology were successively formed. Each of the above twelve Departments began to hold monthly meetings. The permanent funds and property of the Institute were increased \$3,000. Additions were made to the Library, and its circulation was increased from 12,000 to 36,000 volumes per year. The classes in drawing were enlarged, and a general citizens' movement to secure a Museum of Arts and Sciences for Brooklyn was inaugurated.

#### 1889-90.

The progress of the Institute during the year 1889-90 was even greater than in the preceding fifteen months. The membership of the twelve Departments organized the previous year was somewhat more than doubled. Eight new and strong Departments, viz., Architecture, Electricity, Geography, Mathematics, Painting, Philology, Political and Economic Science, and Psychology, were formed. The membership was increased from three hundred and fifty to eleven hundred; to the collections of the Institute were made very large additions; the Library was reorganized and its circulation increased from the rate of 36,000 volumes to 55,000 volumes per year; 1,500 new books were placed in the Library for the benefit of the Departments and their members; the number of lectures, exhibits and meetings of Departments was increased from about ninety in the previous year to two hundred and thirty; the attendance on the Department meetings was nearly doubled; the number of members taking an active part in the meetings and in the work of the Institute was quadrupled; the quality of the lectures and addresses was an improvement over that of the previous year; and out of the abundance of active and increasing interest in the Arts and Sciences awakened by the old Brooklyn Institute the new Brooklyn INSTITUTE OF ARTS AND SCIENCES was born, destined to absorb the old Institute, to command the attention,

the admiration, the love and the support of every resident of Brooklyn, to foster the interests of other educational institutions in her limits, and to become a means for the education, the refinement and the uplifting of all her people.

#### 1890-1.

The growth of the Institute received a temporary check during the year 1890-1. On September 12th a serious fire in the Institute Building rendered it unfit for immediate use. But owing to the generous hospitality of other institutions in the city it was possible to carry on the work of the Institute elsewhere. The Young Men's Christian Association, the Union for Christian Work, the Packer Collegiate Institute, the Brooklyn Library, the Polytechnic Institute, the Brooklyn Heights Seminary, the Church of the Saviour, the Adelphi Academy, and the Brooklyn Art Association each contributed the use of rooms for the lectures and the work of the Departments. And notwithstanding the fact that the work of the Institute was distributed at various points, its progress was of a permanent and substantial character:-three hundred and twelve new members were added; the membership of each of the twenty Departments was enlarged; the number of lectures and meetings was increased to three hundred and ten as against two hundred and thirty in the previous year; the attendance on the lectures was augmented, reaching an average of about one hundred and eighty for each lecture, or a total of 46,000; the Geographical Department brought together a collection of geographical appliances, consisting of maps,

globes, charts, reliefs, models, atlases, treatises, textbooks and other publications, valued at \$6,000; the Geographical Collection was exhibited in Brooklyn for four weeks, and in Boston for three weeks; the Boston Exhibition was visited by about 16,000 people, and the Brooklyn Exhibition by upwards of 27,000 people; subscriptions toward the Endowment Fund of the proposed Museums were made to the amount of \$51,500, and by act of legislation the city was authorized to expend \$300,000 in the erection of the proposed Museum of Arts and Sciences on Prospect Hill.

#### 1891-2.

During the fourth year of active work after the reorganization of the Institute six hundred and thirtytwo new members were recorded, of whom about onethird were teachers in our public and private schools; the Architectural Department established a school for junior architects and draughtsmen; the Department of Painting aided in the establishment of the Brooklyn School of Fine Arts; the Department of Geography exhibited its collection in New York City for four weeks for the benefit of the teachers and citizens of New York and vicinity; the Department of Music was established during the Autumn by the musical profession, with a membership of one hundred and seventeen; the Department of Pedagogy was organized in March with two hundred and six members from the teaching profession; the Photographic Department provided itself with an excellent suite of rooms adapted to its purposes at an expense of about \$1,000; two Summer Schools of Art were established—one of them at the seashore and the other in the mountains; the Departments of Architecture, Microscopy and Photography gave large and excellent exhibitions that were free to the public; the number of lectures and meetings by the Departments was increased from three hundred and twelve in the previous year to four hundred and five; the average attendance at the lectures was larger than in any previous year, and the total attendance on the lectures, meetings and exhibitions exceeded one hundred and twenty thousand; subscriptions to the Endowment Fund were received amounting to \$16,000; the real estate belonging to the old Brooklyn Institute in Washington street was sold to the Trustees of the New York and Brooklyn Bridge, and the net proceeds of the sale, amounting to \$72,000, were invested in city bonds; the old Brooklyn Institute was consolidated with the new Brooklyn Institute of Arts and Sciences, transferring thereto its property and estate, amounting to \$139,286 in invested funds, together with collections, library and other property valued at \$42,450; the Mayor and Park Commissioner selected as the site for the Museum Buildings the East Side lands, bounded by the Eastern Parkway, Washington avenue, old President street and the Prospect Hill Reservoir.

#### 1892-3.

During the fifth year the growth of the educational work of the Institute was greater than that of any preceding season. Nine hundred and forty new members were added to the roll; the number of lectures, addresses, concerts and exhibitions open to all the members was 482, as against 405 the previous year;

the number of lectures and class exercises open to members and others by the payment of a moderate fee was 1,397, as against 1,134 the previous year; the number of concerts was increased from 8 to 15; the average daily attendance on all the exercises of the Institute for the eight months of active work was 936, and the total attendance for the year 190,900; the annual income was increased from \$18,934.20 in the previous year to \$31,641.51; special courses of lectures were delivered on American History from the time of Columbus to the beginning of this century, and a special course of addresses was given by college presidents on educational problems; Institute Extension Courses of lectures were given in the eastern section of the city; the School of Political Science was established with four classes and ninety-six pupils; the Brooklyn Art School was transferred to new and larger quarters in the Ovington Studio Building, and the number of pupils was increased from ninety-four to one hundred and twenty-eight; the Department of Architecture, acting through its Advisory Board, devised a scheme of competition for the best plan and design for the proposed Museum of Arts and Sciences, which was accepted by the Board of Trustees, and adopted by the Mayor and Park Commissioner, and a competition for the best plan and design for a Museum Building was completed with a most satisfactory result.

#### 1893-4.

During the year just brought to a close the amount and character of the work were an evidence of the cumulative influence of the previous five years of

systematic and the well directed efforts of the Departments and their members; for notwithstanding the general financial depression of the year the growth of the Institute work surpassed that of any previous season. Nine hundred and seventy-nine new members were enrolled. The total number of members was increased from 2,622 to 3,457, a gain of 835; the total number of lectures, conferences, class exercises, and Department meetings increased from 1,879 to 2,212; the Department of Domestic Science was organized with a membership of forty-two; eighty-seven members of the legal profession were enrolled as members of the Department of Law, whose organization will be completed during the autumn; the annual income was increased from \$31,641.51 in 1892-3 to \$40,169.35; the average daily attendance on the exercises of the Institute was 1,177; the Mayor and Park Commissioner leased to the Institute eleven and nine-tenths acres of land for a period of one hundred years, at one dollar per year, as a site for the Museum Building; the Legislature of the State of New York authorized the expenditure of \$50,000,00 in grading the Institute Park lands, including the Museum site; the Department of Parks of the City of Brooklyn leased at a nominal rental the Bedford Park Building to the Institute for temporary Museum purposes; the Departments of Geography, Zoölogy, Botany, Geology, Mineralogy and Chemistry arranged their collections in the Bedford Park Building for public exhibition; the State Legislature increased the rate of interest on the Museum of Art and Science Bonds to not exceeding four per cent. to enable the city to erect the first section of the Museum

Building, and the architects nearly completed the working plans and specifications of the section of the Museum to be first erected.

A full description of the work of the year 1893-4, and of the Museum Building, will be found in subsequent pages, together with a brief account of the Museum movement.

#### THE GROWTH OF THE INSTITUTE.

I.—THE INCREASE IN THE MEMBERSHIP.

		Number of Members.	Annual Increase.
June 1,	1888	82	
"	1889	352	270
"	1890*	1,118	766
"	1891*	1,324	206*
6.6	1892	1,782	458
6.6	1893	2,622	840
6.6	1894	3,457	835

## II.—The Increase in the Number of Lectures, Meetings and Class Exercises.

	Meetings Open to all Members.	Special Meetings and Class Exercises.	Total.
1887-88	18	60	78
1888-89	90	104	194
1889-90	230	215	445
1890-91	312	622	934
1891–92	405	1,134	1,539
1892-93	482	1,397	1,879
1893-94	489	1,723	2,212

<sup>\*</sup> The Institute Building in Washington street was partially destroyed by fire and sold to the Trustees of the Brooklyn Bridge during the season of 1800-1.

#### INCREASE IN ATTENDANCE.

	Average Daily Attendance.	Average Attendance per Exercise.	Total Attendance for the year.
1887-88	86	86	6,900
1888–89	I I 2	94	18,300
1889–90	230	104	46,950
1890–91	486	106	99,200
1891-92	541	98	120,500
1892-93	936	102	190,900
1893-94	1177	96	212,415

#### INCREASE IN RESOURCES.

	Annual Income.	Permanent Funds.
1887-88	\$5,456 70	\$37,000 00
1888–89	7,364 16	46,000 00
1889–90	11,412 25	66,000 00
1890-91	13,218 11	139,000 00
1891-92	18,934 20	206,000 00
1892-93	31,641 51	211,000 00
1893-94	40,169 35	215,000 00

### CONSTITUTION.

#### ARTICLE I.—MEMBERSHIP.

SECTION I. The membership of the Brooklyn Institute of Arts and Sciences shall comprise Honorary Members, Founders, Benefactors, Fellows, Patrons, Permanent Members, Life Members, Corresponding Members and Associate Members.

SEC. II. HONORARY MEMBERS shall comprise those persons who have rendered distinguished and valuable service to man by their creations, contributions, discoveries or inventions in the Arts and Sciences. The number of Honorary Members shall be limited to fifty.

SEC. III. THE FOUNDERS OF THE INSTITUTE shall comprise those persons who subscribe to the funds of the Institute a sum not less than five hundred thousand dollars, or who present to the Institute sculptures, paintings, books, models, collections in science, apparatus or other property which shall be estimated by the Board of Trustees to be worth to the Institute not less than five hundred thousand dollars. So far as practicable the several Museums of the Corporation shall be dedicated to the philanthropy of the Founders and shall bear their names.

SEC. IV. THE BENEFACTORS OF THE INSTITUTE shall comprise those persons who subscribe to the funds of the Institute a sum not less than one hundred thousand dollars and not exceeding five hundred thousand dollars, or who present to the Institute property which shall be estimated by the Board of Trustees to be worth to the Institute between one hundred thousand and five hundred thousand dollars. As far as practicable the several Galleries of Art and Science, the Libraries, Observatories or other well-defined portions of the property of the Corporation shall be dedicated to the philanthropy of the Benefactors, and shall bear their names.

SEC. V. THE FELLOWS OF THE INSTITUTE shall comprise those Associate members of the Institute who have rendered distinguished and valuable services to man, either by their productions, contributions, discoveries or inventions in the Arts and Sciences, or by their long and eminent service as teachers of Art or Science.

Sec. VI. The Patrons of the Institute shall comprise those persons who subscribe to the funds of the Institute a sum not less than ten thousand and exceeding one hundred thousand dollars, or who present to the Institute property which shall be estimated by the Board of Trustees to be worth to the Institute not less than ten thousand nor more than one hundred thousand dollars. As far as practicable, the property given by the Patrons shall be so arranged as to testify to their philanthropy.

SEC. VII. THE PERMANENT MEMBERS OF THE INSTITUTE shall comprise those persons who contribute

to the Institute funds a sum not less than one thousand nor more than ten thousand dollars, or who present to the Institute at any one time property which shall be estimated by the Board of Trustees to be worth to the Institute not less than one thousand nor more than ten thousand dollars. Permanent Members shall be entitled to transfer their memberships respectively by will or by other legal process.

Sec. VIII. Life Members of the Institute shall comprise those persons who contribute to the funds of the Institute a sum not less than one hundred nor more than one thousand dollars, or who present to the Institute at any one time property which shall be estimated by the Board of Trustees to be worth to the Institute not less than one hundred nor more than one thousand dollars.

Sec. IX. The Corresponding Members of the Institute shall comprise those persons whose knowledge in the arts and sciences qualifies them to contribute special and valuable information to the proceedings of the Institute or of its several departments, and who do not reside within a radius of twenty miles of the city of Brooklyn.

Sec. X. The Associate Members of the Institute shall comprise persons who are specially interested in one or more of the Arts or Sciences. The Founders, Benefactors, Patrons, Permanent Members and Life Members of the Institute shall be regarded as Associate Members, and shall not be subject to the payment of any fees or dues. All other Associate Members shall contribute to the funds of the Institute an Initiation Fee of five dollars, and Annual Dues of five dollars,

payable in advance. An Associate Member shall be entitled, without additional expense, to become a member of as many departments of the Institute as he may elect, to attend all the lectures and meetings of the Institute and of its several departments, and to enjoy all of the privileges for education afforded by the Museums, Libraries, Lectures, Laboratories and other appointments of the Institute, with the exception of the instruction given in the several Schools conducted by the Departments,—the Concerts, Dramatic Readings, Special Meetings authorized by the Council, and the Institute Extension Courses of Lectures,—for which a special fee or admission may be charged.

SEC. XI. The Founders, Benefactors, Patrons, Permanent Members and Life Members of the Institute shall also be known as the Corporate Members of the Brooklyn Institute of Arts and Sciences. Each Corporate Member shall be entitled to vote in the election of Trustees of the Institute, and shall be eligible to election as a member of the Board of Trustees. The Corporate powers of the Institute shall be vested in the Corporate Members. Twenty-five Corporate Members shall constitute a quorum for the transaction of business.

SEC. XII. Honorary Members, Fellows, Corresponding Members and Associate Members shall be nominated by the Council of the Institute, and elected by the Board of Trustees. A two-thirds vote shall be necessary for the nomination and election of persons to the classes of membership named in this section.

Sec. XIII. The Board of Trustees shall have power to admit any institution and its members, on such terms as they shall deem just and proper.

#### ARTICLE II.—BOARD OF TRUSTEES.

Section I. The Board of Trustees shall comprise fifty Corporate Members of the Institute. The Trustees named in the Act of Incorporation shall divide their number into five classes, to be drawn by lot. The first class shall hold office for one year, the second class for two years, the third class for three years, the fourth class for four years, and the fifth class for five years, succeeding the first Friday in May, 1890. On the second Monday in January of each year ten Trustees shall be elected, who shall hold office for five years from the first Friday of the May following, or until their successors are elected. The polls shall be open from five to nine o'clock P.M. on the day of election

SEC. II. The officers of the Board shall be a President, three Vice-Presidents, a Director, a Treasurer, and a Secretary. They shall be elected by the Board of Trustees, on the first Friday in May, each year, and shall hold office for one year, or until their successors are elected.

SEC. III. The Board of Trustees shall have power to fill vacancies in the Board or its offices, and to declare the seat of any member vacated who shall have failed to attend three successive meetings of the Board, unless written excuse satisfactory to the Board shall have been presented.

SEC. IV. The regular meetings of the Board shall be held on the first Friday of each month, except the months of July, August and September, at such hour as the Board from time to time may appoint, written notices for which shall be mailed to each member.

SEC. V. It shall be the duty of the President to preside at the meetings of the Trustees, the Corporation and the Institute, and to present to the Trustees an Annual Report at the regular meeting in May. In the absence of the President, the first Vice-President in order, who is present, shall act in place of the President.

SEC. VI. It shall be the duty of the Treasurer to take charge of the seal, money, funds and securities of the Association; to collect all accounts and sums of money due and payable to the Institute; to pay all bills and accounts when duly audited; to keep a record of all the financial transactions of the Institute, and to report the same to the Board of Trustees as often as required.

SEC. VII. It shall be the duty of the Director, subject to the direction of the Board of Trustees and the several Committees of the Board, to have charge of the Museums and Libraries of the Corporation; to execute the wishes of the Board and of the several Committees; to labor for the best interests of the Corporation, and to report to the Board as often as it shall direct concerning the work and needs of the Institute.

SEC. VIII. It shall be the duty of the Secretary to make and keep a record of the proceedings of the Board of Trustees; to send notices of all meetings of the Board; to notify all persons of their election as

Trustees and officers, and to make an Annual Report to the Trustees in the month of May on the progress of the Institute.

SEC. IX. The Secretary shall call special meetings of the Board at the written request of the President, or of any ten Trustees.

Sec. X. All elections shall be by ballot. A majority of the votes cast shall be necessary to an election.

#### ARTICLE III.—COMMITTEES OF THE CORPORATION.

Section I. The President shall appoint annually in the month of May the following Standing Committees of five members each:

- I. COMMITTEE OF WAYS AND MEANS.
- 2. COMMITTEE ON ART MUSEUMS.
- 3. COMMITTEE ON MUSEUMS OF SCIENCE.
- 4. COMMITTEE ON LIBRARIES.
- 5. Committee on Lectures.
- 6. COMMITTEE ON EDUCATION.
- 7. COMMITTEE ON MEMBERSHIP.

The President, Director and Treasurer shall be *ex-officio* members of each of the Standing Committees.

SEC. II. The President, Director, Treasurer and Secretary of the Board, together with the Chairmen of the Standing Committees, shall constitute the EXECUTIVE COMMITTEE of the Board of Trustees. The President and Secretary of said Board shall be respectively President and Secretary of the Executive Committee.

Sec. III. The Executive Committee shall, under the direction of the Board of Trustees, have the general care of the Institute Buildings, make necessary repairs, regulate the use of the buildings and the collections by the public, and, in general, execute the will of the Board in all matters not specially delegated to other committees or persons.

SEC. IV. The COMMITTEE OF WAYS AND MEANS shall, under the direction of the Board of Trustees, have charge of the collection, increase and investment of the endowment and permanent funds of the Institute, and shall have general charge of the financial interests of the Corporation.

SEC. V. The COMMITTEE ON ART MUSEUMS, under the direction of the Board of Trustees, shall have general charge of the art collections of the Institute and the exhibition of the same; shall effect the purchase, loan or sale of all works of art on behalf of the Institute, and, in general, shall endeavor to increase and improve the art collections of the corporation.

Sec. VI. The Committee on Museums of Science, under the direction of the Board of Trustees, shall have general charge of the scientific collections of the Museums and their exhibition; shall effect the purchase, loan or sale of all collections illustrating the sciences, on behalf of the Institute; and, in general, shall endeavor to increase and improve the collections and the facilities of the Institute for scientific research.

SEC. VII. The COMMITTEE ON LIBRARIES, under the direction of the Board of Trustees, shall have general charge of the Libraries of the Institute and their arrangement and use; shall effect the purchase, loan or sale of all books, pamphlets or other materials properly belonging to the libraries, on behalf of the corporation; and, in general, shall endeavor to increase and improve

the Libraries of the Institute, and their usefulness to all who have access to them.

SEC. VIII. The COMMITTEE ON LECTURES, under the direction of the Board of Trustees, shall have general charge of the courses of lectures given under the auspices of the Institute.

SEC. IX. The COMMITTEE ON EDUCATION, under the direction of the Board of Trustees, shall have general charge of the work undertaken by the Institute for the benefit of those citizens, schools and higher institutions of learning in the city that seek to avail themselves of the opportunities afforded by the Institute for systematic instruction, investigation, production, or research.

Sec. X. The Committee on Membership, under the direction of the Board of Trustees, shall have charge of the admission of members, and the general increase of the membership of the Institute.

SEC. XI. The Committees named in this article shall make a report to the Board of Trustees at each regular meeting.

#### ARTICLE IV.—THE ASSOCIATE MEMBERS.

Section I. The active educational work of the Institute in the Arts and Sciences shall be conducted by the General Body of Associate Members, and the several Departments organized by them, under the authority of the Trustees.

SEC. II. The officers of the General Body of Associate Members shall be a President, a Vice-President from each Department, a Treasurer, and a Secretary. The foregoing officers, together with the President and Director of the Board of Trustees, shall constitute the Council of the Institute.

SEC. III. The following Departments composed of the Associate Members of the Institute may be formed: Anthropology, Archæology, Architecture, Astronomy, Botany, Chemistry, Domestic Science, Electricity, Engineering, Entomology, Fine Arts, Geography, Geology, Law, Mathematics, Microscopy, Mineralogy, Music, Painting, Pedagogy, Philology, Photography, Physics, Political Science, Psychology, Sculpture and Zoölogy.

SEC. IV. The officers of each Department shall be a President, a Vice-President and a Secretary. Such additional officers, constitution, by-laws or rules and regulations as are required by any Department in the accomplishment of its work, and are not provided by the general organization of the Institute, shall be provided by the Department itself. The President of a Department shall be a Vice-President of the General Body of Associate Members.

SEC. V. The Annual Meeting of the Associate Members shall be held on the Tuesday following the first Saturday in May. The Annual Meetings of the various Departments of Associate Members shall be held in May. All other meetings of the various Departments shall be arranged by the Departments themselves.

SEC. VI. The regular meetings of the Council shall be on the fourth Saturday in each month, omitting July, August and September. The regular meeting in May shall also be the Annual Meeting of the Council. At its Annual Meeting the Council shall elect its President and Secretary, who shall be also respectively the President and Secretary of the Associate Members.

SEC. VII. It shall be one of the duties of the President of the Associate Members to present at their Annual Meeting, and at the close of his term of office, an address, which shall include a review of the present condition of some department of the Arts and Sciences. This address shall be incorporated in the proceedings of the Institute.

SEC.VIII. The Council shall recommend to the Board of Trustees measures that will facilitate the general work of the Institute and of its various Departments in the Arts and Sciences, and shall have the direction of the general work of the Body of Associate Members.

SEC. IX. The Council shall appoint at its regular meeting in May the following Standing Committees of five members each:

- I. COMMITTEE ON LECTURES AND MEETINGS.
- 2. COMMITTEE ON PUBLICATIONS.
- 3. COMMITTEE ON MEMBERSHIP.
- 4. COMMITTEE ON APPARATUS.
- 5. COMMITTEE ON SCIENTIFIC WORK.
- 6. Committee on the Arts.

The President and Secretary of the Council shall be *ex-officio* members of the Standing Committees.

SEC. X. Propositions for Associate Membership and Corresponding Membership shall be presented to the Council. Persons already Associate Members or Corresponding Members may be elected members of any Department by the Department itself. The President and Director of the Board of Trustees, and the President and Secretary of the Associate Members, shall be ex-officio members of each Department of the Institute.

SEC. XI. It shall be the duty of each Department of Associate Members to make an annual report in the

month of May to the Board of Trustees and to the Council of Associate Members on the work, the needs, the membership, and the attendance of the Department.

#### ARTICLE V.—COLLECTIONS AND FUNDS.

Section I. The Board of Trustees shall empower the Departments of the Institute to make, classify, preserve, and exhibit the collections in the Departments of the Arts or Sciences belonging to their respective branches. Collections shall be admitted to the Museums and Libraries when they shall have been approved by a Committee of Experts appointed by the Department or Departments immediately concerned, and when approved by the Board of Trustees.

SEC. II. The Annual Dues received from the Associate Members shall be apportioned by the Trustees, on recommendation of the Council, among the various Departments of Associate Members, due regard being held for the number of members, the average attendance, the amount and character of the work done, and the needs of each Department. All other moneys received by the Institute shall be placed to the credit of the General Fund of the Institute, unless otherwise designated by the Board of Trustees, or by the person or estate from which they are received.

#### ARTICLE VI.—AMENDMENTS.

This Constitution may be amended by the concurrent vote of the Board of Directors and the Council, at regular meetings of the same, provided written notice of the proposed amendment is mailed to each member of the respective bodies at least four days before their respective meetings.

# THE BY-LAWS

OF

# THE BOARD OF TRUSTEES.

Section I. The Order of Business at the meetings of the Board of Trustees shall be as follows:

- 1. Reading of Minutes.
- 2. Communications.
- 3. Report of Treasurer.
- 4. Report of Director.
- 5. Report of Executive Committee.
- 6. Report of Standing Committees.
- 7. Report of Special Committees.
- 8. Election of Officers or Members.
- 9. Unfinished business.
- 10. Motions and Miscellaneous Business.

This order may be suspended by vote of the Board at any meeting.

SEC. II. All bills against the Institute, contracted by the authority of the Board, shall be audited by the President and Director. All bills contracted by the Executive Committee shall be audited by the President and the Secretary of the Board. All bills contracted by a Standing or Special Committee shall be audited by the President of the Board and the Chairman of the Committee under whose auspices the

expense has been incurred. All bills payable from the Associate Funds of the Institute shall be audited by the Secretary and the Assistant Secretary of the Council.

SEC. III. The Treasurer shall make a monthly report of the finances of the Institute, and an annual report at the regular meeting in May.

SEC. IV. The Director shall present a report of the work done by the Institute in each succeeding month, and an annual report of the work of the Institute at the regular meeting of the Board in the month of May.

SEC. V. The Executive Committee shall present monthly reports at the regular meetings of the Board, and shall present an annual report at the regular meeting in May.

SEC. VI. The President, Treasurer, Director and Secretary may incur petty expenses in the discharge of their duties, the sum of which shall not exceed One Hundred Dollars, in each case, in any given month.

SEC. VII. The Director shall give as much of his time to the Institute and its interests as the Board of Trustees shall demand, and shall receive compensation therefor. The compensation shall be fixed each year by the Trustees.

SEC. VIII. These By-laws may be amended at any Regular meeting of the Board, provided notice of the proposed amendment is mailed to each member of the Board, at least four days previous to the meeting.

# WORK OF THE YEAR 1893-4.

# I.—Anniversary Meetings and Addresses.

THE OPENING MEETING AND ADDRESS.

On Monday evening, October 2d, the Institute held its opening meeting for the Season of 1893-4. Gen. John B. Woodward, President of the Institute, made an introductory address, in which he greeted the members and congratulated them on the excellent programme which the Departments had prepared for the coming season. He then presented to the audience President E. Benjamin Andrews, LL.D., of Brown University, who delivered an address on "The Influence of Modern Science on the Religious Convictions of Men." After the address, an informal Reception was given to President Andrews.

# THE WASHINGTON ANNIVERSARY AND PHILLIPS BROOKS MEMORIAL MEETING.

The one hundred and sixty-second anniversary of the birthday of George Washington was observed in accordance with the provisions made by Augustus Graham, the first Benefactor of the Institute. The Address of Eulogy was in commemoration of the life and services of the late Rt. Rev. Phillips Brooks, D.D., LL.D., and was pronounced by the Rt. Rev. Thomas M

CLARK, D.D., Bishop of Rhode Island. Through the generosity of one of the members of the Board of Trustees of the Institute, the address was published in pamphlet form for distribution.

# II.—Addresses and Lectures on Special Subjects.

Oct. 11.—Address by President G. STANLEY HALL, Ph.D., LL.D., of Clark University, on "The Professional Training of Teachers."

Feb. 16.—Address by the Hon. WILLIAM T. HARRIS, LL.D., Chief of the U. S. Bureau of Education, on "The Educational Outlook." This lecture was given under the joint auspices of the Department of Pedagogy and the Brooklyn Teachers' Association.

Mar. 28.—Lecture by Dr. Dudley A. Sargent, of Harvard University, on "The Physical Development of College Students," illustrated by lantern photographs that indicated the methods used in measuring students, and also by models and diagrams showing the physical development of young men and young women in college.

# III.—General Course of Lectures on the Great Lessons Taught by the Columbian Exposition.

Oct. 25.—Lecture by Prof. A. D. F. Hamlin, of Columbia College, on "The Architecture of the Exposition," illustrated by lantern photographs of the buildings of the Exposition.

Nov. 8.—Lecture by Mr. F. Edwin Elwell, of New York, on "Sculpture at the Exposition," illustrated by lantern photographs of the sculptures and casts exhibited at the Exposition.

Nov. 22.—Lecture by Mr. WILLIAM M. CHASE, President of the Society of American Artists, and Chairman of the Jury for the Selection of Paintings for the Exposition, on "Lessons from the Paintings in the Fine Arts Building," illustrated by photographic reproductions of many of the leading works on exhibition.

Dec. 20.—Lecture by the Hon. WILLIAM E. CURTIS, Chief of the Latin-American Department of the Exposition, on "Columbus and the La Rabida," illustrated by one hundred lantern photographs, relating to the Life of Columbus and the Exhibits of the La Rabida at the Exposition.

Jan. 31.—Lecture by the Hon. Edwin Willets, Assistant Secretary of Agriculture, Washington, D. C., and Chairman of the Board of Management of the Agricultural Exhibits of the United States at the "Exposition." Subject: "The Agricultural Exhibits of the Exposition," illustrated by lantern photographs.

Feb. 21.—Lecture by Mr. WILLIAM KENT, M.E., of New York, Secretary of the American Society of Mechanical Engineers, New York, on "The Exhibits of Machinery Hall," fully illustrated.

Mar. 7.—Lecture by Dr. Rossiter W. Raymond, M. E., of Brooklyn, on "The Mining Building and its Exhibits," illustrated by lantern photographs of the Mining Exhibits.

April 4.—Lecture by Rev. IDA C. HULTIN, of Chicago, on "Woman's Work at the Columbian Exposition.

April 26.—Lecture by Prof. F. R. Hutton, of Columbia College, on "The Exhibits of the Transportation Building at the World's Fair." This lecture was given under the auspices of the Department of Engineering, and was fully illustrated.

# IV .- The Augustus Graham Lectures.

In presenting to the Institute its first Endowment Fund, Mr. Augustus Graham stipulated that the income of a portion of the Fund should be used in providing from time to time courses of lectures on "The Power, Wisdom and Goodness of God as Manifested in His Works." The lectures during the past season were as follows:

Jan. 28.—Lecture by Dr. James F. Kemp, Professor of Geology in Harvard University, on "Certain Features in the Geological Development of the Earth, which illustrate the Power, Wisdom and Goodness of God."

Feb. 11.—Lecture by Charles A. Young, LL.D., Professor of Astronomy at Princeton College, Honorary Member of the Institute, on "God's Glory in the Heavens."

Mar. 11.—Lecture by Mr. William Hamilton Gisson, of Brooklyn, on "The Fertilization of Flowers," illustrated by colored mechanical charts.

April 1.—Lecture by Prof. Marvin R. Vincent, D.D., of Union Theological Seminary, New York, on "Human Speech a Witness to God."

# V.—General Exhibitions by Departments.

THE DEPARTMENT OF MINERALOGY held its fourth Annual Exhibition in the Art Association Galleries from Wednesday, Nov. 22d, to Saturday, Nov. 25th. The Exhibition comprised the largest and finest Collection of Minerals, Ores, Gems and Precious Stones ever placed on Free Exhibition in Brooklyn or New York, and was visited by upwards of 7,000 persons. A fuller description of the Exhibition will be found under the Department of Mineralogy.

THE DEPARTMENT OF MICROSCOPY held its seventh Annual Exhibition, in the Galleries of the Art Association, on Monday evening, January 15th, from 8 to 11. Sixty microscopes were in use throughout the evening, and fifteen hundred and thirty persons were admitted by card to the Exhibition.

THE ARCHITECTURAL DEPARTMENT gave its third Annual Exhibition of Architectural Designs and Drawings, in the Galleries of the Brooklyn Art Association, from Saturday, March 31st, until Saturday, April 21st. The Exhibition was open free to the public from 9 A.M. until 10 P.M., and was attended by upwards of five thousand people. A description of the Exhibition will be found under the account of the work of the Department of Architecture.

THE GEOGRAPHICAL DEPARTMENT exhibited the famous Sella Collection of Photographs of Snow Mountain Scenery, loaned to the Department by the Appalachian Mountain Club, in the Galleries of the Brooklyn Art Association, from Tuesday, May 1st, to Monday, May 7th. The Exhibition was free to the public, and was visited by 2,454 persons.

THE DEPARTMENT OF PHOTOGRAPHY held its fourth Annual Exhibition in the Galleries of the Art Association, in conjunction with the Brooklyn Academy of Photography, from Thursday, May 24th, to Saturday, June 2d, inclusive. The Exhibitors comprised 22 from the Brooklyn Academy of Photography and 29 from the Institute, besides 17 Professional Photographers. The Exhibition numbered about seven hundred photographs, and was visited by upwards of 6,000 persons.

# WORK OF THE DEPARTMENTS.

# DEPARTMENT OF ARCHÆOLOGY.

#### Officers.

Prof. William H. Goodyear, M.A., President.

Prof. Thomas Flint, Vice-President.

Stansbury T. Hager, Secretary.

Mr. John Bliss, Treasurer.

#### Executive Committee.

Prof. Wm. H. Goodyear, M.A.

Prof. F. W. Osborn, M.A.

Barr Ferree, M.A.

Prof. Thomas Flint, M.A.

Frank Sherman Benson.

Charles E. West, LL.D.

Joseph H. Hunt, M.D.

George N. Olcott.

Stansbury T. Hager.

The Department was organized on May 8th, 1889, with twenty-four members. The present membership is one hundred and twenty-nine, and the gain during the year was nine. The Department has held regular monthly meetings during the year, on the third Mondays of each month. The lectures delivered at these meetings have been as follows:

Oct. 16.—Lecture by Joseph H. Hunt, M.D., Member of the Department, on "Mexican Archæology," illustrated by lantern photographs of relics of prehistoric races in Mexico and by a valuable collection of relics recently brought from Mexico by the lecturer.

Nov. 20.—Lecture by Prof. Otis T. Mason, of the National Museum, and the U. S. Bureau of Ethnology, Washington, D. C., on "The Primitive Inventor and his Patents," illustrated by lantern photographs.

Dec. 18.—Lecture by Mr. Walter Hough, of the National Museum, on "Aboriginal Methods of Fire-Making," illustrated by practical demonstrations and by lantern photographs.

Feb. 20.—Lecture by Prof. WILLIAM H. GOODYEAR, M.A., Curator of Fine Arts of the Institute, on "The Pattern Ornaments of the Bronze Culture Considered as Showing Evidence of the European Origin of the Aryan Races," illustrated by lantern photographs.

Mar. 19.—Joint Meeting of the Departments of Archæology and Architecture. Lecture by Miss Annie S. Peck, M.A., of Providence, R. I., on "The Greek Theatre," illustrated by lantern photographs.

April 17.—Lecture by Dr. Charles Knapp, of Barnard College, on "The Roman Theatre," illustrated by lantern photographs.

May 21.—Annual Meeting. Lecture by Mr. Stansbury Hager, on "Tiahuanacu, the Thebes of America."

A special course of eight Institute Extension lectures was given under the auspices of the Departments of Archæology and Fine Arts, by Prof. William H. Goodyear, M.A., on "The Origin and History of Classic Greek and Roman Civilization from the Standpoint of the Monuments." The subjects and dates are given in detail under the Fine Arts Department.

The collections of the Department have been moved to the temporary Museum of the Institute in Bedford Park, and will be placed on exhibition during the coming year.

#### DEPARTMENT OF ARCHITECTURE.

President WALTER DICKSON, Vice-President. ISAAC E. DITMARS. WASHINGTON HULL. Secretary. Treasurer. GUSTAVE A. JAHN,

#### Executive Committee.

WALTER DICKSON. STEPHEN W. DODGE. GEORGE L. MORSE. A. G. THOMSON. LOUIS DE COPPET BERG. GEORGE P. CHAPPELL. CHARLES T. MOTT. ISAAC E. DITMARS. RICHARD M. UPIOHN. H. P. FOWLER. Franklin W. Hooper. WILLIAM DANMAR. GUSTAVE A. JAHN. D. ERNEST LAUB. ALBERT E. PARFITT. F. J. BERLENBACH, JR. Washington Hull. BARR FERREE. SAMUEL B. SNOOK. OSWALD SPEIR.

Committee on Current Work.

FRANK H. QUIMBY.

ALBERT E. PARFITT. FRANKLIN W. HOOPER. WILLIAM DANMAR.

Committee on Museum and Library.

GEORGE L. MORSE. RICHARD M. UPJOHN.

BARR FERREE.

Committee on Competitions and Awards.

A. G. THOMSON.

George L. Morse.

GEORGE P. CHAPPELL.

Committee on Professional Practice.

Louis De Coppet Berg.

D. Ernest Laub.

CHARLES T. MOTT.

Committee on Social Intercourse.

H. P. FOWLER.

F. J. Berlenbach, Jr.

OSWALD SPEIR.

Committee on Finance and Audit.

SAMUEL B. SNOOK.

FRANK H. QUIMBY.

STEPHEN W. DODGE.

Committee on Architectural School.

George L. Morse.

Prof. Wm. H. GOODYEAR.
Prof. Franklin W. Hooper.

WALTER DICKSON.
LOUIS DE COPPET BERG.

ALBERT H. BROCKWAY.

WILLIAM B. TUBBY.

#### Committee on Architectural Exhibition.

Albert E. Parfitt. Walter Dickson.

STANFORD WHITE. S. B. SNOOK.

George L. Morse. William B. Tubby.

RUDOLPHE L. DAUS. FRANKLIN W. HOOPER.

THOMAS HASTINGS.

JAMES H. MERRITT.

BARR FERREE.

ALBERT H. BROCKWAY.

Committee on Collection of Photographs of Historic Buildings.

WILLIAM DANMAR.

PIERRE LE BRUN.

GEORGE W. WUNDRUM.

#### The Advisory Board.

The Advisory Board comprises practicing architects and teachers of Architecture who are members of the Department and in good standing in the profession.

LOUIS DE COPPET BERG. F. J. BERLENBACH, IR. WM. A. BORING. Albert L. Brockway. JOHN M. CARRÈRE. GEORGE P. CHAPPELL. EDWARD B. CHESTRESMITH. RALPH N. CRANFORD. JAMES W. CROMWELL, JR. GEORGE T. CURNOW. KRISTEN DAHLER-TANGEN. WILLIAM DANMAR. RUDOLPHE L. DAUS. WALTER DICKSON. ISAAC E. DITMARS. STEPHEN W. DODGE. JOHN H. DUNCAN. Louis Duvinage. RICHARD B. EASTMAN. CARL F. EISENACH. THEOBALD ENGELHARDT. BARR FERREE. ROBERT B. FIELD. Adam E. Fischer. H. P. FOWLER. FRANK FREEMAN. IOHN G. GLOVER. Prof. WILLIAM H. GOODYEAR. VINCENT C. GRIFFTH. Prof. A. D. F. Hamlin. THOMAS HASTINGS. J. Monroe Hewlett, WILLIAM C. HOUGH. THOMAS F. HOUGHTON. WASHINGTON HULL.

GEORGE INGRAM. ANEURIN JONES. D. ERNEST LAUB. GEORGE M. LAWTON. PIERRE LE BRUN. A. J. Manning. CHAS. F. MCKIM. WM. RUTHERFORD MEAD. TAMES H. MERRITT. GEORGE M. MORRIS. Montrose W. Morris. GEORGE L. MORSE. GEORGE TREMAINE MORSE. CHARLES T. MOTT. A. MILTON NAPIER. JAMES W. NAUGHTON. Albert E. Parfitt. W. A. PARFITT. WALTER E. PARFITT. Augustus Pauli. Prof. Wm. C. Peckham. JOHN J. PETTIT. Prof. George W. Plympton. FRANK H. QUIMBY. Frank A. Regan. Gustave A. Skrzyneki. Lyndon P. Smith. SAMUEL B. SNOOK. OSWALD SPEIR. RUSSELL STURGIS. WILLIAM B. TUBBY. A. G. Thomson. RICHARD M. UPIOHN. LAWRENCE B. VOLK.

GEORGE W. WUNDRAM.

STANFORD WHITE.

The Department of Architecture was organized on December 13, 1889, with a membership of one hundred and eight. The present membership is two hundred and sixty-six. The meetings of the Department are regularly held on the third Tuesday of each month. The lectures at the regular meetings of the Department during the past year have been as follows:

Oct. 25.—Lecture by Prof. A. D. F. Hamlin, of Columbia College, on "The Architecture of the Exposition," fully illustrated by lantern photographs.

Nov. 14.—Lecture by Mr. WILLIAM DANMAR, Member of the Department, on "The Wood Architecture of Switzerland," illustrated by lantern photographs.

Dec. 12.—Lecture by Mr. Albert L. Brockway, Secretary of the Department, on "Architecture from an Architect's Point of View," illustrated by lantern photographs.

Mar. 14.—Lecture by Mr. Albert E. Parfitt, Member of the Department, on "An Architectural Jaunt in the 16th Century," illustrated by one hundred lantern photographs.

Mar. 19.—Lecture by Miss Annie S. Peck, M.A., of Providence, R. I., on "The Greek Theatre," illustrated by lantern photographs.

April 23.—Lecture by Mr. Wm. Danmar, Member of the Department, on "The Colonial Residences of New England," illustrated by lantern photographs.

The Annual Meeting of the Advisory Board of the Department was held on Wednesday evening, May 16, when the officers and committees were elected for the year 1894–5, and reports were received from the several standing and special committees of the Department.

The Architectural School, conducted by the Department of Architecture for the benefit of junior architects, draughtsmen and graduates of the professional schools, held its sessions on Monday to Friday evenings of each week from October 16th until April 20th, or twenty-six weeks. The number of students in the several courses was fifty-six. Attendance was required on three evenings a week throughout the season.

The Courses of Instruction in the School were as follows:

- I. General Course in Architectural Drawing.
- II. Introductory Course in Shades and Shadows. Problems rendered in India ink, color washes, etc.
- III. Advanced Course in Shades and Shadows. Problems drawn in line only.
- IV. Introductory Course in Perspective. Problems to be rendered in India ink and color washes.
- V. Advanced Course in Perspective. Problems to be drawn in line only.
- VI. Introductory Course in Free-hand Drawing from Architectural Models and Ornaments and from the Antique.
- VII. Advanced Course in Free-hand Drawing from Architectural Models and Ornaments and from the Antique.

VIII. Course of Instruction in the Artistic Use of Color on Architectural Drawings.

Courses I.-V. inclusive were given under the instruction of Mr. John W. McKecknie, of the Metropolitan Museum of Art. Courses VI.-VIII. were conducted by Mr. Joseph H. Boston, of the Brooklyn Art School.

In addition to the class instruction in the studio room occupied by the school, illustrated lectures were given by Prof. A. D. F. Hamlin, of Columbia College, on "The Architectural Orders," as follows:

Oct. 16.—"The classic orders: their origin, development and significance: their parts and proportions."

Oct. 23.—"The orders in Greek architecture; principles, and important monuments."

Oct. 30.—"The orders in Roman architecture; decorative use; changes in style and decoration."

Nov. 6.—"The orders in modern architecture. The Renaissance; changed requirements; criticisms and suggestions."

The Course of eight lectures on Græco-Roman Art and Architecture, given by Prof. WILLIAM H. GOOD-YEAR, M.A., on Monday evenings in January and February, before the Departments of Fine Arts and Archæology, was open to students of the Architectural School. Single lectures were also given for the benefit of the students of the School, by the following persons: Mr. George L. Morse, Architect, on "The Elements of the Practice of Architecture;" Mr. WIL-LIAM DANMAR, Architect, on "Colonial Architecture in New England;" Miss Annie S. Peck, of Providence, on "The Architecture of the Greek Theatre;" by Mr. George C. Tidden, Architect, on "Architecture in Ancient Rome;" and by Mr. Lyndon P. SMITH, Architect, on "The Construction of Frame Dwellings."

The instruction given in the school had special application to office work. Each student was encouraged to take such course or courses as would most

directly aid him in advancing along definite and practical lines of work. The tuition for each term of thirteen weeks was \$8.00, and for the full year of twenty-six weeks \$15.00, payable in advance. Students taking two courses pay \$12.00 for one term and \$20.00 for the year.

The Special Committee in charge of the school comprises Messrs. George L. Morse, Louis De Coppet Berg, Walter Dickson, Albert E. Parfitt, Prof. William H. Goodyear, Prof. Franklin W. Hooper and Albert L. Brockway.

The Advisory Board of the Department, which is composed of professional architects and instructors in Architecture, has held several social meetings for the discussion of questions of interest to architects.

Nov. 14.—Meeting at the residence of Prof. Frank-LIN W. Hooper. Paper by Mr. Thomas Hastings, Architect, of New York, on "The Nature and Origin of Architectural Styles," followed by discussion.

Dec. II.—Meeting at the residence of Mr. George L. Morse, Architect, First President of the Department. Paper by Mr. Walter Dickson, Architect, President of the Department, on "The Licensing of Architects," followed by a discussion, and the appointment of a committee to consider the subject and report at a subsequent meeting.

Jan. 17.—Meeting at the residence of Mr. ISAAC E. DITMARS, Architect, Vice-President of the Department. Report of the Committee on "The Licensing of Architects." Discussion of the report and a continuance of the committee.

Mar. 14.—Meeting at the residence of Mr. WILLIAM B. Tubby, Architect, Third President of the Department. The subject of discussion for the evening was the plans for the Brooklyn terminal station of the East River Bridge.

April 30.—Meeting in the galleries of the Brooklyn Art Association, on the occasion of the opening of the Third Annual Exhibition of Architectural Designs and Drawings. Subject for discussion, "The Drawings and Designs of the Exhibition."

May 16.—Meeting in the Directors' Room of the Art Building. Reports of the Special Committee on Licensing Architects, and of the Standing Committees of the Department.

The Third Annual Architectural Exhibition was held in the Art Association Galleries with the co-operation of the Art Association, from March 31st until April 21st, the exhibition being open to the public from 9 A.M. until 10 P.M. The attendance at the exhibition was fifty-two hundred. The exhibition comprised:

- 1. Architectural Designs embodied in Plans, Elevations, Sections or Perspectives.
- 2. Designs for Decoration, Furniture and Interiors.
- Cartoons for Stained Glass, Decorations, Ornaments and the like.
- 4. Models of Executed or Proposed Work.
- 5. Carvings in Stone, Wood or other Material.
- 6. Wrought Iron, Mosaics, Glass or Stuffs.
- 7. Drawings, Sketches or Paintings of Architectural or Decorative Subjects.
- 8. Photographs of Executed Work.

A complete catalogue of the exhibition was published, which contained three hundred and ninety-eight entries. Copies of this catalogue are kept at the office of the Institute for distribution. Among those who contributed most to the exhibition were Aspin-WALL & RENWICK, ROBERT L. ADAMS, MARGARET ARM-STRONG, HELEN MAITLAND ARMSTRONG, PERCY ASH, HERBERT ADAMS, ARNOLD & LOCKE, BORING & TILTON, Brunner & Tryon, Robert H. Bryson, Babb, Cooke & WILLARD, CARL BEIL, GEORGE E. BISSELL, BENSON & BROCKWAY, S. M. BARSTOW, THEODORE BAUER, G. R. BARSE, JR., HOWARD RUSSELL BUTLER, KARL BITTER, F. A. COMSTOCK, RUSSELL P. COOKE, CARRÈRE & HAS-TINGS, FREDERICK CROWNINSHIELD, CORKE & PALMER, WILLIAM DANMAR, JAMES DUNN, STEPHEN W. DODGE, RUDOLPHE L. DAUS, DE LEMOS & CORDES, J. WILLIAM FOSDICK, THORNTON FLOYD, FRANK FREEMAN, ERNEST FLAGG, JOHN LYMAN FAXON, GRIFFIN & RANDALL, JOHN G. GLOVER, PETER GRAFE, R. W. GIBSON, RICH-ARD M. HUNT, J. S. HARTLEY, C. A. HUTCHINGS, HAZLEHURST & HUCKEL, FRANK HEGGAR, J. L. HART-LEY, CHARLES C. HAIGHT, F. L. V. HOPPIN, HEUSER & HAUSLEITER, MORRIS J. S. HARTLEY, JARDINE, KENT & JARDINE, EDGAR JOSSELYN, HENRY LINDER, J. & R. LAMB, ELLA CONDIE LAMB, LITTLE, BROWN & MOORE, PETER DE LUCE, LAMB & RICH, MARGARET LOCKE, Julius Loester, Peter Lauckhardt, Le Brun & Sons. JAMES B. LORD, MAITLAND, ARMSTRONG & CO., ARCHI-BALD McLEAN, McKim, MEADE & WHITE, FREDERICK MARSCHALL, GEORGE L. MORSE, MONTROSE W. MORRIS, CHARLES NIEHAUS, CLARK NOBLE, VICTOR OLSA, PAR-FITT BROS., HARRY L. PARKHURST, BRUCE PRICE, PAUL J. Pelz, Pottier, Stymus & Co., George C. Palmer,

C. C. PEDDLE, HELEN REED, RAMBUSCH & PETTIT, I. MASSEY RHIND, EDWARD C. RANSON, ROMEYN & STEVER, ROTCH & TILDEN, GRENVILLE TEMPLE SNELLING, C. M. SHEAN, THEODORE B. STARR & CO., F. SCHUMACHER & Co., D. Sammann, C. W. & A. A. Stoughton, Thorn-TON F. TURNER, WILLIAM B. TUBBY, EVERETT KIL-BOURNE TAYLOR, T. C. POAT TRELEAVEN, RICHARD M. UPJOHN, VANTINE & Co., W. B. VAN INGEN, DUNHAM WHEELER, CHARLES E. WEST, EDMUND M. WHEEL-WRIGHT, WINSLOW BROTHERS CO., WILLIAM WALTON, WHEELWRIGHT & HAVEN, E. J. WILLINGALL, F. J. WILEY, GEO. E. WOOD, THEODORE L. WILBERG, CHAS. R. YANDELL & CO., GORHAM MFG. CO., YALE & TOWNE Mfg. Co., Petrara Onyx Co., Columbia College SCHOOL OF MINES, HECLA IRON WORKS, TIFFANY GLASS AND DECORATING CO., SKETCH CLUB OF NEW YORK, ART STUDENTS' LEAGUE, ASSOCIATED ARTISTS, and HENRY BONNARD BRONZE CO.

The Committee in charge of the Architectural Exhibition was as follows: Mr. Albert E. Parfitt, Chairman; Messrs. George L. Morse, Stanford White, Walter Dickson, Thomas Hastings, Rudolphe L. Daus, William B. Tubby, Barr Ferree, James H. Merritt, S. B. Snook, Albert H. Brockway, and Mr. William H. Ingersoll, Secretary.

The Executive Committee, in which is vested the chief responsibility for the conduct of the work of the Department, has held meetings nearly every month during the season.

The Department has received from Mr. Alfred T. White a donation of twenty-eight bound volumes of *Architecture and Building*, being a complete set from the beginning of the publication.

#### DEPARTMENT OF ASTRONOMY.

GARRETT P. SERVISS, President.
ARTHUR C. PERRY, Vice-President.
JAMES P. HALL, Secretary.
B. G. WAY, Librarian and Treasurer.

#### Executive Committee.

GARRETT P. SERVISS. ARTHUR C. PERRY.
HENRY M. PARKHURST. B. G. WAY.
WILLIAM F. SEBERT. JAMES P. HALL.

This Department was organized on May 10th, 1888, by the Members of the American Astronomical Society, who resided in New York, Brooklyn and the neighboring towns, and began its work as a Department with thirty-two members. The present membership is one hundred and fifty-six, a gain of sixteen during the year.

The regular public meetings of the Department were held on the first Monday evening of each month, with an average attendance of one hundred and fifty. The proceedings at the meetings during the season have been as follows:

Oct. 3.—Opening Lecture by Mr. James P. Hall, Secretary of the Department, on "The Value of Astronomical Photography," illustrated by lantern photographs.

Nov. 6.—Lecture by Mr. B. G. Way, Librarian of the Department, on the subject "Are Other Worlds Inhabited?" illustrated by lantern photographs.

Dec. 4.—Lecture by Mr. Arthur C. Perry, Vice-President of the Department, on "Some Revelations of the Spectroscope; or, The Constitution of the Stars," illustrated by lantern photographs.

Jan. 8.—Lecture by Mr. William F. Sebert, Member of the Department, on "What Small Telescopes Show," illustrated by lantern photographs.

Feb. 5.—Lecture by Miss B. Edwina H. Hamblet, Member of the Department, on "The Evolution of a Star," illustrated by lantern photographs.

Feb. 12.—Lecture by Prof. Charles A. Young, LL.D., of Princeton College, on "Astronomical News; or, Some of the Recent Discoveries in Astronomy," illustrated by lantern photographs.

Mar. 5.—Lecture by Mr. Henry M. Parkhurst, first President of the Department, on "Celestial Visits," illustrated.

April 2.—Two papers were presented, one by Mr. Gardner D. Hiscox, Member of the Department, on "Recent Studies of the Solar Corona," and one by Mr. Charles A. Post, on "Astronomical Photography."

May 7.—Annual Meeting. Lecture by Mr. GARRETT P. Serviss, President of the Department, on "The Astronomical Progress of the Year ending May 1st, 1894," followed by a discussion.

The Department organized, on May 5th, a Section on Constellations, for the purpose of studying the constellations systematically and continuously. Mr. Arthur C. Perry, Vice-President of the Department,

was elected Chairman, and Miss Edwina H. B. Hamblet Secretary. Twenty-eight members were enrolled, and meetings of the new organization were held on alternate Thursday evenings from February to the end of the season in June. The meetings were held at the Library of the Bedford Park Building, where the opportunities to study the constellations were favorable, and where the members were able to make charts showing the results of their work.

A movement to establish a People's Astronomical Observatory has been inaugurated, and subscriptions towards a fund have been made amounting to \$950. The movement will be made public as soon as a favorable opportunity appears, when a general popular subscription will be sought.

The Department has a very valuable library of works on Astronomy, numbering several hundred volumes. A portion of these remain unbound, and money is needed to defray the expense of binding. The library has received by donation during the past year several bound volumes and pamphlets from its members.

Several members of the Department have good working telescopes, permanently mounted, with which they are doing excellent work. The Institute will need, in its future development, a large and well-equipped Astronomical Observatory adjoining its Museum of Science on the Prospect Hill site. It is somewhat remarkable that the metropolitan district, with upwards of three millions of people, should not have a single large telescope.

#### DEPARTMENT OF BOTANY.

Rev. George D. Hulst, Ph.D., President.

J. W. Martens, Jr. Vice-President.

Miss Helena D. Leeming, Secretary.

Thomas Proctor, Treasurer.

Smith Ely Jelliffe, M.D., Curator.

#### Executive Committee.

Rev. George D. Hulst, Ph.D.
Joseph H. Raymond, M.D.
J. W. Martens, Jr.
Thomas Proctor.
J. H. Hunt, M.D.
Rev. J. L. Zabriskie.
Smith Ely Jelliffe, M.D.
Miss Katherine O. Fernie.
Mrs. Caroline A. Creevey.
Miss Helena D. Leeming.

Organized on December 13th, 1888, with twenty-one members. The present membership is two hundred and forty-four, a gain of fifty-eight members during the year. The regular meetings of the Department, held on the third Tuesday of each month, have been as follows:

Oct. 17.—Opening Lecture, by Rev. George D. Hulst, Ph.D., President of the Department, on "A Talk about Ferns," illustrated by Herbarium specimens and by lantern photographs.

Nov. 21.—Lecture by Thomas Morong, Ph.D., of Columbia College, on "The Botany of the Lake St. Clair Region," illustrated by mounted specimens and lantern photographs.

Dec. 19.—Lecture by SMITH ELY JELLIFFE, M.D., Curator of the Herbarium of the Department, on "The Early Botanists," illustrated by lantern photographs.

Jan. 16.—Lecture by Prof. EMILY F. GREGORY, Ph.D., of Barnard College, on "The Hepaticæ and their Morphological Position," illustrated by charts, specimens, and lantern photographs.

Feb. 20.—Lecture by Prof. Byron D. Halsted, Sc.D., of Rutgers College, on "The Uses of Flowers," illustrated by charts and lantern photographs.

March 30.—Meeting of the Department in the Botanical Room of the Bedford Park Museum, for the examination of the collections of the Department.

April 24.—Lecture by Mr. Cornelius Van Brunt, of New York, on "Some of our Wild Flowers," illustrated by a beautiful series of colored lantern photographs, illustrative of "Flower Photography."

May 15.—Lecture by Mrs. CAROLINE A. CREEVEY, on "Vegetable Poisons, with Special Reference to Toad-stools," illustrated by lantern photographs and drawings.

Several informal meetings of the members of the Department were held during the season for the purpose of comparing observations and naming specimens.

The Herbarium of the Department has been enlarged during the year by a number of gifts from its members and friends.

The Herbarium of the Department has been placed in the temporary Museum Building at Bedford Park, where it may be used by members, under rules established by the Executive Committee of the Department. It comprises the Calverley Collection of some nine thousand specimens, two thousand specimens recently donated to the Department, the collection of Swiss plants presented by the Rev. Dr. Charles H. Hall, first President of the Department, and the collection recently deposited with the Institute by Mr. E. S. Miller, of Floral Park, L. I.

A special course of instruction in Botany was given during the year under the auspices of the Department, and in the series of Institute Extension Courses, during the months of March, April, May, and June, by Smith Elv Jelliffe, M.D. The Course consisted of fourteen lectures, illustrated by mounted and fresh specimens, diagrams, charts, microscopic preparations, and lantern photographs, given on successive Friday afternoons, and eleven Field Meetings, held on successive Saturday afternoons, at points of Botanical interest within a radius of ten or fifteen miles of the city. The purposes of the Field Meetings were to collect specimens and to illustrate the Friday lectures by the study of fresh material

The subjects covered by the lectures and Field Meetings were as follows:

#### PART I.—CRYPTOGAMS.

March 30.

- (a) General Considerations of Plant Life. Non-vascular Cryptogams. Lowest forms of Vegetation. One-celled Plants.
- (b) Algæ. Diatoms, desmids, green moulds.
- (c) Fungi. Yeast; bacteria of consumption, typhoid and cholera. Multicellular Plants.
- (d) Algæ. Oscillaria, sea lettuce, rockweed.
- (e) Fungi. Moulds and mildews, rusts and blights.

April 6.—CRYPTOGAMS (Continued).

- (a) Higher Fungi. Mushrooms, puff-balls, shelf fungi and their method of bearing spores.
- (b) Lichens. Crustaceous, foliaceous and fruticose types. Theory of Symbiosis.

April 13.—CRYPTOGAMS (Continued).

- (a) Mosses. Sphagni and true mosses.
- (b) Hepaticæ. Scale mosses.

April 20.—VASCULAR CRYPTOGAMS.

- (a) Club Mosses.
- (b) Ferns. Root, stipe, fronds, sori, sporangia.

# PART II.—PHANEROGAMS.

April 27.—Roots. Rhizoids, tubers, functions of the root hair.

May 4.—Stems. Trunks, laws of branching, buds and phyllotaxy.

May 11.—Leaves. Structure, position, arrangement, forms and uses.

May 18.—Leaves (continued). Inflorescence: varieties and adaptations.

May 25.—The Floral Envelopes. Forms and modifications.

June 1.—Floral Envelopes (continued).

June 8.—The Reproductive Organs. The Andrœcium and its parts.

June 15 .- The Gynacium and its parts.

June 22.—Fruits. Structure and morphology.

June 29.—Seeds. Structure, form and methods of dissemination.

A printed syllabus of each lecture was given to those in attendance to aid the student in his future study. The course was attended by eighty persons. The average attendance on the lectures was about sixty.

The Department of Botany in conjunction with the Torrey Botanical Club, of New York, continued its Field-day Meeting on Saturdays and Legal Holidays from May to October inclusive in the summer of 1894, as in the preceding five seasons. The attendance on these meetings varied between fifteen and forty-six, and about two hundred and fifty different persons were present during the season.

#### DEPARTMENT OF CHEMISTRY.

ROBERT G. ECCLES, M.D., E. H. BARTLEY, M.D., EDGAR J. WRIGHT, HERBERT B. BALDWIN. President Vice-President. Secretary. Treasurer.

#### Executive Committee.

ROBERT G. ECCLES, M.D.
WALTER H. KENT, Ph.D.
Prof. ALBERT C. HALE, Ph.D.
EDWARD H. SQUIBB, M.D.
E. H. BARTLEY, M.D.
WILLIAM MCMURTRIE.
A. H. SABIN.

Prof. Franklin W. Hooper.
Prof. Wm. W. Share, Ph.D.
John A. Dunn.
Herbert B. Baldwin.
Prof. A. A. Breneman, Ph.D.
Edgar J. Wright.
Lucius Pitkin.

The Department of Chemistry was organized in November, 1888, with twenty-seven members. The present membership is one hundred and fifty, a gain of six during the year. The regular meetings are held on the fourth Monday of each month, and during the past year have been as follows:

Oct. 27.—Lecture by Prof. R.OGDEN DOREMUS, M.D., of New York, on "Toxicology and its Relation to Medicine and to the Public."

Nov. 24.—Lecture by Prof. Morris Loeb, of the University of the City of New York, on "Fundamental Ideas in Modern Chemistry," illustrated by experimental demonstrations.

Dec. 22.—Lecture by Prof. Charles E. Munroe, of Columbian University, Washington, D.C., on "Modern Explosives; their Application in War and in Peace," illustrated by apparatus and lantern photographs.

Jan. 26.—Lecture by ROBERT G. ECCLES, M.D., Vice-President of the Department, on "How Molecules are Measured," illustrated by charts and lantern photographs.

Feb. 23.—Lecture by Prof. A. H. Sabin, Member of the Department, on "Varnishes, their Technology and Use," illustrated by a large collection of varnishes and by apparatus used in their preparation.

Mar. 23.—Lecture by Mr. Herbert B. Baldwin, Chemist of the Newark Board of Health, on "Precipitation and Precipitates," illustrated by experimental demonstrations.

April 27.—Lecture by Robert G. Eccles, M.D., Vice-President of the Department, on "The Atmosphere and its Changes in Geological Time."

May 25.—Annual Meeting. Lecture by ELIAS H. BARTLEY, M.D., of Long Island College Hospital and the Brooklyn College of Pharmacy, on "The Chemistry of Nutrition," illustrated by experimental demonstrations and by numerous charts.

The collection of chemicals and apparatus has been placed in the temporary Museum in Bedford Park. The Library of the Department comprises about two hundred volumes of works of reference on Chemistry.

#### DEPARTMENT OF DOMESTIC SCIENCE.

Miss Emma O. Conro,
Mrs. Andrew Jacobs,
Mrs. W. B. Davenport,
Mrs. Franklin W. Hooper,
Miss Fannie Bigelow,

Mrs. Franklin W. Hooper,
Mrs. Frankli

#### Executive Committee.

Miss Emma O. Conro.

Mrs. A. E. Palmer.

Mrs. Andrew Jacobs.

Mrs. Abbie L. Ham.

Mrs. W. B. Davenport.

Mrs. C. C. Knowlton.

Mrs. Franklin W. Hooper.

Mrs. Josephine Seymour.

Mrs. J. K. Dunn.

Miss Elizabeth Reeves.

Mrs. Louise Both-Hendriksen.

This Department was organized on November 13th, 1893, with a membership of forty-two. The purpose of the Department is the study of practical problems in Domestic Science. Standing committees have been appointed on the following subjects:

- The sanitary and economic construction of dwellings.
- 2. The general principles of house furnishing.
- 3. The composition, value and preparation of foods.
- 4. Labor-saving methods and utensils.
- 5. Sanitation and economy in clothing.
- 6. Domestic service.
- 7. Systems of co-operative housekeeping.

The regular meetings of the Department are held on the fourth Thursday of each month, and during the year have been as follows:

Nov. 13.—Joint meeting under the auspices of the Pratt Institute and the Brooklyn Institute for the purpose of organizing the Department. Lecture by Mr.

EDWARD ATKINSON, of Boston, on "The Production and Waste of Food Material." The lecture was fully illustrated and given in the Assembly Hall of the Pratt Institute.

Nov. 29.—Lecture by Mrs. Andrew Jacobs, Vice-President of the Department, on "How to Get the Most Comfort out of our Homes with the Least Possible Expense," followed by discussion.

Dec. 19.—Lecture by Miss Emma O. Conro, Director of the Domestic Science Department at the Pratt Institute, and President of the Department, on "The Elevation of Household Service."

Jan. 11.—Lecture by Prof. W. T. Sedgewick, of the Massachusetts Institute of Technology, under the auspices of the Pratt Institute and the Brooklyn Institute, on "The Philosophy of Cleanliness," with lantern illustrations.

Feb. 15.—Lecture by Miss Louise Both-Hendriksen, on "The Development of the Home," or "From the Cave to the Modern Home."

April 5.—Lecture by James Wood, M.D., of Brooklyn, on "Economy in the Selection and Preparation of Food," illustrated by charts and diagrams.

May 10.—Annual meeting. Lecture by Prof. Dwight Porter, on "The Disposal of the Wastes of Modern Life," illustrated.

Arrangements have been made to have lectures on the second Thursday evening of each month, and conferences of members on the fourth Thursday afternoon of each month, during the season of 1894-5.

#### DEPARTMENT OF ELECTRICITY.

JAMES HAMBLET, WILLIAM S. BARSTOW, ) 1. P. WINTRINGHAM, JOHN F. SKIRROW, J. C. REILLY,

President. Vice-Presidents. Secretary. Treasurer.

#### Committee on Electrical Measurements and Standards.

Prof. Samuel Sheldon, Ph.D. Prof. DANIEL W. HERING, C.E. CHARLES E. EMERY, Ph.D. WILLIAM S. BARSTOW, Prof. WILLIAM W. SHARE, Ph.D. F. V. HENSHAW. J. P. WINTRINGHAM.

TAMES HAMBLET. Prof. WILLIAM C. PECKHAM. Prof. John S. McKay, Ph.D. Prof. E. R. VON NARDROFF. F. LA OTIS LATHROP.

# Committee on Laboratory and Apparatus.

Prof. WILLIAM C. PECKHAM. Prof. John S. McKay, Ph.D. GEORGE M. HOPKINS. WILLIAM C. BURLING.

Prof. SAMUEL SHELDON, Ph.D. Prof. Daniel W. Hering. Prof. E. R. VON NARDROFF. J. P. WINTRINGHAM.

#### Committee on Electric Lighting.

WILLIAM S. BARSTOW. GEORGE W. HEBARD. I. Lester Woodbridge, M.E. ROGER S. WHITE.

EDWARD F. PECK. FRANKLIN S. HOLMES. DOUGLAS BURNETT. A. I. House.

#### Committee on Telegraph and Telephone.

WILLIAM D. SARGENT. J. C. REILLY. WILLIAM B. HALSEY. R. J. MURPHY.

EDWARD H. LYON. MINOR M. DAVIS. JOHN F. SKIRROW. J. C. F. PRIEST.

#### Committee on Electro-Metallurgy.

Prof. WILLIAM W. SHARE. HORACE A. DWVER.

Dr. P. H. VAN DER WEYDE. CHARLES E. F. LEWIS.

Committee on Applications of Electricity to Medicine and Surgery.

E. H. Bartley, M.D.

Joseph H. Raymond, M.D.

George G. Hopkins, M.D.

J. Lester Keep, M.D.

Wm. M. Hutchinson, M.D.

O. M. Bartley, M.D.

Chas. T. Schondelmeier, M.D.

L. A. W. Alleman, M.D.

J. B. Jones, M.D.

Peter Scott, M.D.

C. K. Beldin, M.D.

This Department was organized on March 21st, 1890, with one hundred and thirty members. The present membership is two hundred and thirty-seven, a gain of five during the year. The Lectures and Meetings of the Department during the season have been as follows:

Nov. 3.—Lecture by Mr. James Hamblet, President of the Department, on "The Electricity Building and Electrical Exhibits of the Columbian Exposition," illustrated by lantern photographs.

Dec. 1.—Lecture by Mr. D. McFarlan Moore, of the Edison General Electric Co., on "Decorative Electric Lighting," illustrated by lantern photographs and models.

Jan. 5.—Lecture by Mr. A. W. K. PIERCE, of the Crocker-Wheeler Electrical Co., on "The Dynamo: its Construction and Principles of Operation," illustrated by apparatus and lantern photographs.

Feb. 2.—Lecture by Mr. WILLIAM S. BARSTOW, Vice-President of the Department, on "The Electrical Stations of the Edison Electric Illuminating Company in Brooklyn," illustrated.

Mar. 2.—Lecture by Mr. Joseph Sachs, of New York, on "Electric Canal-boat Propulsion, with Special Reference to the Erie Canal," illustrated by lantern photographs.

April 6.—Lecture by James H. Gerry, of New York, on "Systems of Electric Signaling as Demonstrated at the Columbian Exposition, including Time Signaling, Train Despatching and Regulating Time-pieces," illustrated by models and lantern photographs.

May 22.—Annual Meeting. Lecture by Mr. H. NEWMAN LAWRENCE, M.I.E.E., of New York, on "Electricity and the Human Body: Facts, Fallacies and Fancies," illustrated.

The lecture room used by the Department has been fitted with high and low tension currents for use in the illustration of lectures. The large Hawkridge lantern has been provided with a new Clark Electric Arc Light of 3,500 candle power, for use in projecting lantern photographs illustrating the lectures of the Department and of the Institute. The Tisdell lantern has been provided with the Beseler Electric Arc Lamp for the same purpose.

The collection of electrical apparatus belonging to the Department has been placed on exhibition as far as practicable during the year in the temporary Museum Building at Bedford Park.

The Edison Electric Illuminating Company has very generously tendered to the Department of Electricity the use of a large lecture room in its new building at 360 Pearl St., two blocks from City Hall Square, for the lectures and meetings of the Department the coming year. The room is provided with sufficient electric current to enable the Department to witness experiments on almost any scale that the lecturer may require. Special courses of lectures will be given in the new lecture room during the season of 1894-5.

#### DEPARTMENT OF ENGINEERING.

CHARLES E. EMERY, Ph.D., C.E., SAMUEL McELROY, C.E., LOUIS DUVINAGE, C.E., Prof. ISAAC E. HASBROUCK, President. Vice-President. Secretary. Treasurer.

#### Executive Committee.

CHARLES E. EMERY, Ph.D., C.E.
CHARLES C. MARTIN, C.E.
HENRY W. BRINCKERHOFF, C.E.
JOHN MCNAMEE, C.E.
Prof. ISAAC E. HASBROUCK,

O. F. NICHOLS, C.E.
J. FOSTER FLAGG, C.E.
SAMUEL McElroy, C.E.
LOUIS DUVINAGE, C.E.
ANTHONY JONES, C. E.

#### Committee on Lectures.

Prof. George W. Plympton, C.E. Dr. Charles E. Emery, C.E. J. Foster Flagg, C.E. Samuel McElroy, C.E.

HERMAN STUTZER, Jr.

#### Committee on Practical Work.

O. F. Nichols, C.E.

JAMES BRADY.

CHARLES C. MARTIN, C.E.

HENRY W. BRINCKERHOFF.

WILLIAM J. BALDWIN, C.E.

## Committee on Membership.

Samuel McElroy, C.E. John McNamee, C.E.

Louis Duvinage, C.E. George Ingram, C.E.

ARTHUR S. TUTTLE, C.E.

The organization of the Department of Engineering was effected on March 12th, 1889, with thirty-six members. The present membership is one hundred and forty. The regular meetings are held on the third Friday of each month, and during the past season have been as follows:

Oct. 20.—Lecture by Dr. Charles L. Hogeboom, of Cedarhurst, L. I., on "The Water Bed of Long Island and Its Relations to Sewage," followed by discussion.

Nov. 17.—Lecture by Mr. WILLIAM H. JAQUES, M.E., of South Bethlehem, Pa., on "The Manufacture of Heavy Armor and Ordnance for the United States Government," illustrated by lantern photographs.

Dec. 15.—Lecture by Mr. Frank W. Skinner, C.E., of New York, on "The Engineering Problems of Lofty Structures. Part I. Bridges," illustrated by lantern photographs.

Jan. 3.—Lecture by Mr. Carl E. Myers, on "Aerial Locomotion; or, The Conquest of the Air," illustrated by lantern photographs of the Aereomotor invented by Mr. Myers, and by views taken from the Motor by Mr. T. A. Tisdell, of Brooklyn, at different altitudes above the earth.

Jan. 19.—Lecture by Mr. Frank W. Skinner, C.E., of New York, on "The Engineering Problems of Lofty Structures. Part II. Bridges and Roofs," illustrated by lantern photographs.

Mar. 16.—Lecture by Mr. Harris Tabor, of New York, on "The Development of the Steam Indicator on Engines," illustrated by lantern photographs.

May 18.—Annual Meeting. Lecture by Major Alfred Sears, C.E., on "The Engineering and Economic Problems of the Coast Desert of Peru and Chili," illustrated by lantern photographs of the country.

To the library of the Department have been added the last two volumes of the Engineering Reports of the United States Government, and six volumes of current Engineering journals, together with a number of pamphlets on Engineering subjects of current interest.

### DEPARTMENT OF ENTOMOLOGY.

RICHARD F. PEARSALL,
ARCHIBALD C. WEEKS,
Rev. GEORGE D. HULST, Ph.D.,
Prof. John B. SMITH,
CHRISTOPHER H. ROBERTS,
RODRIGUES OTTOLENGUI, M.D.S.,

President.

Nice-President.
Recording Secretary.
Corresponding Secretary.
Treasurer,
Curator and Librarian.

#### Executive Committee.

RICHARD F. PEARSALL. Prof. John B. Smith.
CHRISTOPHER H. ROBERTS. Rev. George D. Hulst, Ph.D.
RODRIGUES OTTOLENGUI, M.D.S. ARCHIBALD C. WEEKS.

#### Publication Committee.

Prof. John B. Smith. Edward L. Graef.
A. W. Putnam Cramer. Richard F. Pearsall.

Organized by the Brooklyn Entomological Society in September, 1888, with thirty-five members. The present membership is thirty-eight. The lectures before the Department have been as follows:

Oct. 30.—Lecture by Prof. John B. Smith, of Rutgers College, Corresponding Secretary of the Department, on "The Transformation of Insects," illustrated by lantern photographs.

Nov. 29.—Lecture by Prof. John B. Smith, of Rutgers College, on "Animal Parasites," illustrated by lantern photographs.

Dec. 30.—Joint meeting with the Departments of Geography and Zoölogy at the Bedford Park Museum. Exhibition of the Collections of the Department.

Jan. 29.—Lecture by Prof. George Macloskie, LL.D., of Princeton College, on "The Internal Skeleton of Insects," illustrated by large charts and diagrams.

Mar. 30.—Lecture by Mr. Lyman A. Best, Principal of Public School No. 13, on "The Wings of Insects," illustrated by lantern photographs and by specimens.

April 30.—Lecture by Prof. J. A. LINTNER, New York State Entomologist, Albany, on "The Voices of Insects," illustrated.

May 3.—Annual Meeting. Election of Officers and Reports of Officers and Members.

The Entomological collections have received very large additions during the past few years through the generosity of Mr. William Calverly, who has presented to the Institute the entire collection made by his father, the late Stephen Calverly, and comprising many thousand Coleoptera, Lepidoptera, Hymenoptera and Neuroptera. The collection was made in this country during the years 1832 to 1872. It contains many rare forms, is in good preservation, and is accurately labeled. Catalogues accompanying the collection give the location, time of collection, and habitat of most of the insects.

The Institute has received recently as a Loan Collection the very large and valuable collection of Lepidoptera made and owned by Prof. Julius E. Myer, Member of the Department. The collection comprises 18,000 specimens, and represents 11,500 species.

The Library on Entomology comprises most of the standard works on the subject, together with nearly complete series of the publications of Entomological Societies. Seventy volumes have been added during the past year.

The collections and library have been placed in a large room in the Museum Building in Bedford Park, where members may have access to them under the direction of the Curator and Librarian.

## DEPARTMENT OF FINE ARTS.

The establishment of this Department was authorized by the Council and the Board of Trustees on February 11, 1888. The membership in June, 1889, was one hundred and thirty-two. The present membership is four hundred and seventy-seven, a gain of thirty during the past season. No organization of the Department has as yet been effected. The General Committee on Lectures, appointed by the Council of the Institute, has conducted three courses of lectures during the past season for the benefit of the members of the Department.

The First Course was given by Prof. WILLIAM H. GOODYEAR, M.A., of New York, on "Ancient Statues and their Modern Critics," on Tuesday afternoons, with subjects and dates as follows:

Nov. 14.—" Winckelmann's Life and Work."

Nov. 21.—"The Criticism of Greek Art as Formulated by Winckelmann."

Nov. 28.—" Lessing's Life and Work."

Dec. 5.—"The Criticism of Greek Art as Formulated by Lessing."

Dec. 12.—"Goethe's Life and Work."

Dec. 26.—"A Criticism on Greek Art as Formulated by Goethe."

The Second Course was also given by Prof. William H. Goodvear, on Monday evenings, on the following dates and subjects:

Jan. 8.—"Assyrian and Chaldean Art and History, and their relations to the Greeks and Later Times."

Jan. 15.—"Cypriote Art and History as related to the Orient and to Greece."

Jan. 22.—"The Art and History of the Mycenæ Period and of the Early Greeks."

Jan. 29.—"The Surviving Monuments of the Athenian Acropolis (Sculpture and Architecture)."

Feb. 5.—"Architectural Ruins of Greece: The Sequence of the Greek Orders as a Reflex of Greek History."

Feb. 12.—Early Italian, Etruscan and Roman Art and History."

Feb. 18.—"Architectural Monuments of the Roman Empire."

Feb. 26.—" Architectural Monuments of the Roman Orient."

This course was a continuation of the history of civilization in chronologic order, from the conclusion of last season's course of lectures on the "Civilization of Egypt."

Each lecture was fully illustrated by lantern views, mostly selected from six hundred new photographs never before shown in Brooklyn.

The Third Course of lectures was given by Miss Louise Both-Hendrikson, Lecturer in the Brooklyn Art School, on Friday afternoons, as follows:

Dec. 15.—"Cimabue: The Influence of Byzantine Art and its Translation into Italian Art."

Dec. 22.—"Giotto: Interdependence of Painting, Sculpture, Architecture and Literature in Italy."

Jan. 2.—Duccio and Simone Memmi: The Sienese School and Mysticism."

Jan. 5.—"Fra Angelico: Color Allied to Purity."

Jan. 12.—"Fra Lippo Lippi and Masaccio: Truth in Humanity."

Each lecture was beautifully illustrated by lantern photographs of the works of art described by the lecturer.

# DEPARTMENT OF GEOGRAPHY.

JAMES. S KEMP,	President.
Cyrus C. Adams,	Vice-Presidents
Judge Charles P. Daly,	vice-1 restaction
JAMES CRUIKSHANK, LL.D.,	Secretary.
ALMON G. MERWIN, Ph.D.,	Treasurer.

### Executive Committee.

CYRUS C. ADAMS,	JAMES S. KEMP.
Judge Charles P. Daly.	JAMES CRUIKSHANK, LL.D.
ALMON G. MERWIN, Ph.D.	Prof. DARWIN G. EATON.
CHARLES M. SKINNER.	LEWIS E. MEEKER, M.D.

The organization of the Department of Geography was effected on February 15th, 1890, with thirty members. The present membership is one hundred and seventy-two, a gain of fifteen during the year. The following regular meetings have been held on the second Friday evening of each month during the past season.

Oct. 13.—Lecture by Mr. Courtney De Kalb, of New York, on "The Mosquito Coast and the Unexplored Country of Nicaragua," illustrated by lantern photographs.

Nov. 10.—Lecture by Mr. J. C. Blume y Corbacho, of New York, on "The Peruvian Andes; or, Above the Clouds in Peru," illustrated by lantern photographs.

Dec. 8.—Lecture by M. Heli Chatelain, of the Smithsonian Institution, on "The Native Tribes I Have Met in Africa," illustrated by lantern photo-

graphs.

Jan. 12.—Lecture by Mr. CYRUS C. Adams, President of the Department, on "Maps and Map Making," followed by discussion.

Feb. 9.—Lecture by Principal James Cruikshank, LL.D., on "Educational Maps and the Teaching of Geography, illustrated by maps, charts and lantern photographs.

March 9.—Lecture by Prof. Thomas C. Mendenhall, LL.D., Superintendent of the U. S. Coast Survey, on "Alaska and its Boundaries," illustrated by an excellent series of lantern photographs.

April 13.—Lecture by Dr. F. A. Cook, on "Greenland and the Eskimo," illustrated by an excellent collection of lantern photographs, and by two Eskimos in tribal costume.

May 11.—Annual Meeting. Lecture by Joseph H. Hunt, M.D., member of the Department, on "The Mountains of Mexico," illustrated by lantern photographs.

May 23.—Lecture by Gen. DAVID B. SICKELS, of New York, on "Siam, the Land of the Lotus,"

illustrated by lantern photographs.

The Geographical Collections were on Exhibition, at the Bedford Park Museum, on each Saturday afternoon, on and after December 9th. Explanatory descriptions of the collections were given by Mr. James S. Kemp, Dr. James Cruikshank, and Mr. Cyrus C. Adams, to visitors. The attendance was from ten to seventy-five, and was chiefly composed of teachers and their pupils.

The Department has added during the last year to its collection of Geographical material a large number of maps relating to the discovery of America.

During the years 1890-'91, the Department, acting through its President and Executive Committee, was engaged in forming a most valuable collection of geographical publications and apparatus used in illustrating or teaching the subject of Geography. The collection numbers twelve hundred and fifty items, comprising maps, atlases, globes, contour maps, reliefs, models, telluria, textbooks, works of reference, books of travel, charts, surveys, and other publications, from the leading publishing houses of Germany, Switzerland, France, England, Holland, Italy, Austria, Russia, Sweden, Norway and Turkey, together with the publications of the U.S. Coast and Geodetic Survey, U.S. Topographical, Geological and Ethnological Surveys, State Surveys, and other works published in this The collection is valued at six thousand country. dollars

Among the most instructive objects in the collection are twenty-six maps of the world, prepared to show the political, physical, climatic, geological, ethnological, botanical or other features of the earth; seventy-four maps of North and South America, and their several political divisions and subdivisions, designed to show

physical, geological, ethnological, agricultural, industrial and other characteristics of the Western Hemisphere: ninety maps of Europe and its political divisions, including the most beautiful cartography of Switzerland, Italy, Scotland, France and Germany, and designed to show the physical geography, the geology, orography, hydrography, topography, the density of population, the industrial development, the ethnology, and the numerous other features of European geography and civilization; Dr. H. Kiepert's series of classical maps; fourteen maps of Asia, nine maps of India and Ceylon, fifteen maps of Palestine, eleven maps of Africa and ten maps of Australasia. The collection of maps has been made representative rather than exhaustive. No two maps in the collection were designed for the same purposes.

The collection of Topographical Survey Maps includes the maps of the U. S. Coast and Geodetic Survey, the surveys of the several States and the several countries of Europe. The collection of diagrams and charts includes a large number of illustrations designed for use in teaching history, geography, cartography, meteorology, astronomy and surveying. Twenty sets of maps in sheets, designed to teach nearly every phase of geographical science, include some of the most valuable works by Dr. H. Kiepert, T. Ruddiman Johnston, Esq., Prof. Arnold Guyot and other cartographers.

One of the most instructive portions of the collections is the series of forty-four geographical and astronomical globes and tellurians, published in Germany, the United States, England and France, and

including the publications of Dr. H. Kiepert, Prof. C. Adami, H. Schedler, Esq., Andrews Manufacturing Co., Ginn & Co., George Phillip & Co., Robert Gair, Esq., Prof. B. Cora, E. Schotte & Co., and Dietrich Reimer, Esq. The relief maps and geographical models comprise maps of Italy, Rome and vicinity, Vesuvius and vicinity, Italy and Switzerland, Alpi Cozie, Switzerland, Central Switzerland, Canton Glarus, Alsace, Great Britain, England and Wales, France, Palestine, Europe, Asia, Africa, the United States, New York City and vicinity, Boston and vicinity, North America, South America, the Island of Oahu in the Hawaiian group, a series of models designed to teach physical geography and geology, a model of the Atlantic, in which water is kept in motion in a manner closely resembling the ocean currents, and several models designed for use in teaching elementary geography. Sixteen series of geographical pictures include Hölzel's Geographische Charakterbilder, thirty-four plates; Ferdinand Hirt's Geographische Bildertafeln, sixty plates; Lang's series of Bilder zur Geschichte, sixty-one plates; Brehm's Zoölogical Atlas, fifty-five plates; T. Ruddiman Johnston's series of Zoölogical Charts; George Phillip & Co.'s Ethnological Charts and Prof. A. Kirchoff's Rassenbilder, twelve plates.

The library of the collection comprises forty-two modern, eight historical, eight classical, nine scriptural and sixty-seven school atlases; five atlases of physical geography; one hundred and forty-six textbooks on geography; twenty-two forms of geographical drawing books; thirty geographical works intended as aids to teachers; thirty-four dictionaries and works of ref-

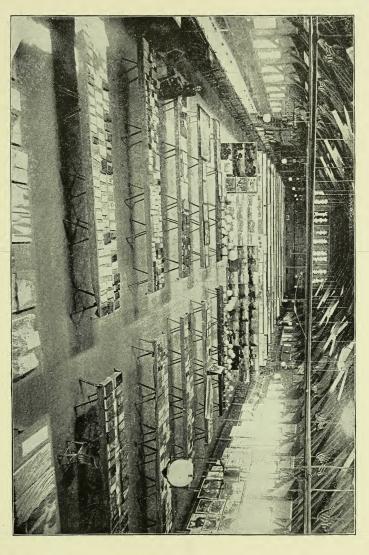
erence on geography; several treatises on commercial geography and navigation, together with a selected list of books of travel and guides to tourists.

Full and accurate information concerning the entire collection may be obtained from the catalogue of the collection published by the Institute.

The Geographical Collection was first exhibited in Brooklyn during the month of March, 1891, when it was visited by about 37,000 people. In June of the same year it was exhibited in Boston, under the auspices of the Appalachian Club, and was visited by about 12,000 persons, and in December and January, 1891-2, it was exhibited at the Natural History Building in Central Park, New York, under the auspices of the New York Teachers' Association. The attendance at the New York exhibition exceeded 14,000 persons.

The Third Annual Exhibition of Geographical Publications was given by the Department on October 13th, 14th and 15th, in the Galleries of the Art Association. Being held during the week of the Columbian Celebration the Exhibition was made to include more particularly those portions of the collection which relate to American Geography and Discovery. The attendance during the three days was upwards of four thousand.

The FOURTH ANNUAL EXHIBITION was given in conjunction with the Brooklyn Art Association in the Art Galleries in Montague Street. It comprised the Collection of Photographs of Mountain Scenery made by Count Vittorio Sella of Italy and loaned to the Geographical Department by the Appalachian Mountain Club. The collection contained three hundred and forty-five large



GENERAL VIEW OF THE GEOGRAPHICAL EXHIBITION AS GIVEN IN BOSTON.



mounted photographs of the Alps, Caucasus and Pyrenees Mountains. Many of the pictures were in series giving continuous views many miles in extent. The exhibition was supplemented by the large scale Alpine Maps belonging to the Department, which were used by those in attendance in locating the views contained in the photographs.

The Exhibition was open to the public seven days (May 1st to 7th inclusive), and was visited by 2,452 The value of the collection was frequently attested by those who are specialists in Geography, as well as by those who have had much experience in the higher regions of the Alps. The interest taken in the views has seldom been equaled in our city. Experienced amateur photographers admired the quality of the photographs and the daring of the man who had secured negatives from so great and perilous heights. Students in physical geology were delighted with their opportunity to study the glacial phenomena of so wide a region and from so many new and high altitudes. Teachers of geography brought their pupils in groups, and were able to replace word pictures of mountain scenery and mountain formations with views taken directly from nature.

The most important work of the Department during the season of 1893-4 has been the arrangement of the Department's collection for exhibition, reference and study in the temporary Museum Building in Bedford Park. Under the direction of Mr. James S. Kemp, President of the Department, and with the advice and assistance of the members of the Executive Committee, every map, globe, relief, model, atlas and work of

reference in the collection has been placed so as to be accessible to the members and to the general public.

The collection has been open to the public on Saturdays and to members of the Institute by card on other week days. The number of visitors has increased each week as the presence and value of the collection have become known throughout the city. The large scale maps are consulted by those who desire to arrange their routes of travel; the political maps, by those who are teaching history; the relief maps, by those who are teaching physical geography or geology; and the whole collection by teachers from schools, colleges and institutes of learning for the purpose of ascertaining what geographical publications will be of most value to them in their teaching. Principals and teachers from the public schools of Brooklyn, New York and neighboring towns have brought with them classes of pupils to study the maps of countries whose history and geography they were studying in the class-room.

The collection has been visited during the year by several distinguished scientific men and explorers, among them Prof. Thomas C. Mendenhall, LL.D., Superintendent of the U. S. Coast and Geodetic Survey, Prof. Angelo Heilprin, of Philadelphia, Prof. Stephen Salisbury, of Chicago, General Greely and Lieut. Peary, the Arctic explorers.

Through the efforts of Mr. Cyrus C. Adams, the First President of the Department, large additions were made to the collections during the year, consisting of industrial implements and ornaments used by native tribes in the southern portion of the Congo Free State.

## DEPARTMENT OF GEOLOGY.

Prof. John S McKay, Ph.D.,
Rossiter W. Raymond, Ph.D.,
Prof. Wallace Goold Levison,
William G. Bowdoin,
Prof. Daniel S. Martin,

President.
Vice-President.
Secretary.
Treasurer.
Curator.

#### Executive Committee.

Prof. John S. McKay, Ph.D. Prof. Darwin G. Eaton. Rossiter W. Raymond, Ph.D. Prof. J. J. Stevenson. William F. Sebert. James Priddy.

Prof. Franklin W. Hooper.
Prof. Daniel S. Martin.
William G. Bowdoin
William H. Bedford.
Frederick Braun.
Wallace G. Levison.

The Department of Geology was organized on December 18th, 1888, with thirty-four members; its present membership is one hundred and fifty-nine, a gain of one in the course of the past year. The meetings during the year have been held on the first Tuesday of each month, as follows:

Dec. 5.—Lecture by ARTHUR HOLLICK, Ph.D., of Columbia College, on "The Cretaceous Deposits of Long Island," illustrated by diagrams, specimens and lantern photographs.

Jan. 2.—Lecture by Prof. W. LE CONTE STEVENS, Ph.D., of the Rensselaer Polytechnic Institute, on "Mt. Vesuvius and the Bay of Naples," illustrated by lantern photographs.

Feb. 2.—Lecture by Prof. John S. McKav, Ph.D., of the Packer Institute, President of the Department, on "The Phosphate Beds of America," illustrated by lantern photographs and fossils.

Mar. 6.—Lecture by Prof. Franklin W. Hooper, Director of the Institute, on "The Niagara River and its History," illustrated by lantern photographs and charts.

Apr. 3.—Lecture by Prof. WILLIAM N. RICE, of Wesleyan University, on "The Red Sandstones and Trap of the Connecticut Valley," illustrated by lantern photographs.

May 1.—Annual Meeting. Lecture by Prof. WILLIAM HALLOCK, Ph.D., of Columbia College, on "Earth Temperatures," illustrated by diagrams and lantern photographs.

The Department holds field meetings in connection with the Department of Mineralogy and the New York Mineralogical Club every other Saturday during the months from June to October, and on holidays. These meetings give members an opportunity to study the Geology and Mineralogy of New York, New Jersey and Connecticut, within a radius of sixty or seventy miles of Brooklyn, and to add to their collections excellent specimens. Each excursion is in charge of some member who is acquainted with the locality visited.

The Cabinet of the Department has received donations during the year of collections of Rocks from Long Island, Manhattan Island, New Jersey and Westchester County, presented by Prof. Franklin W. Hooper, a collection of Rocks presented by Prof. Daniel S. Martin, a collection of Drift Rocks of Long Island, and a series of sections on one-tenth scale of Drift Sands and Clays of Long Island, Mr. J. E. Underhill, a Member of the Department.

The Departments of Geology, Mineralogy, Chemistry and Physics, together with several liberal members of the Institute, have recently purchased for the Institute and its Departments a large Meteorite discovered in 1891, near Cañon Diablo, in Arizona, by Dr. A. E. FOOTE, of Philadelphia. The Meteorite weighs 335 pounds, is about eighteen inches in its longest diameter, and is composed of 97.5 per cent. iron and 2.5 per cent. nickel. It has the characteristic surface markings, pits, cavities and Widmannstättian lines.

The Collections and Library of the Department have been placed on exhibition as far as possible during the year in the rooms assigned to the Department in the temporary Museum in Bedford Park.

To the Library of the Department have been added eighteen pamphlets and several volumes of the Geological survey of Pennsylvania, the latter presented by Mr. W. A. M. GRIER, a Member of the Department.

### DEPARTMENT OF LAW.

Authority has been given by the Board of Trustees and the Council to establish a Department of Law, and during the past season eighty-seven members of the legal profession have signified their desire to assist in the organization of the new Department, and have become members of the Institute. It is expected that the number of lawyers enrolled will be increased in the Autumn of 1894 to one hundred and fifty, a sufficient number to form a strong Department.

During the past season a course of six lectures on "The Constitutional History of the United States"

was given, under the auspices of the Department of Political Science, by Prof. Woodrow Willson, of Princeton College. This course was of special value and interest to students of statute law.

A Special Course of Institute Extension Lectures on "Law," on subjects that were of particular interest to women, was given by Mrs. Cornella K. Hood, LL.B., of Brooklyn, on Thursday afternoons, on the following dates and subjects:

Mar. 1.—"Woman Under the Law.—Ancient and Modern.—Comparison of Status under the Hebrew Code, Chinese Code, Hindoo Code, Roman Code, French Code, New York Code."

Mar. 8.—"Domestic Relations.—Legal relations of husband and wife.—Marital rights.—Power to contract.—Power to hold property.—Homestead Dower; Courtesy; Insurance."

Mar. 15.—"Marriages.—Lawful; Void; Voidable.— Divorce. A vinculo matrimonii. A mensa et thoro."

Mar. 22.—"Parent and Child.—Power of parents.—Duties of children.—Duties to children.—Majority.—Guardian and ward.—Statutory provisions."

Mar. 29.—"Wills.—Origin, construction, essentials, signature, revocation, probate, executors and administrators, degrees of kinship.—Lineal and collateral heirs."

April 5.—" Contracts.—Definition and nature.—Express or implied conditions precedent and subsequent.—Essentials.—Competency."

April 12.—"Commercial Paper.—Promissory notes, indorsement, interest, usury, bills, foreign and inland checks.—Essentials of negotiable paper."

April 19.-"Agency.-Special, general.-Liability of principal and agent.-Revocation of authority.-Letting or hiring."

April 26 .- "Transfer of property. - By act of law. -Descent or distribution. -Gift or sale."

May 3.—"Landlord and Tenant.—Deeds, leases, etc."

The lectures were presented on the plan of the Law Lectures for Women, given under the auspices of the Law School of the University of New York. The fee for the course for Members of the Institute was \$3.00, and for those not members \$5.00.

The lectures were conducted under the auspices of a committee of ladies interested in promoting legal education among women. The committee was as follows: Mrs. James McKeen, President; Mrs. C. T. Chris-TENSEN, Mrs. Edwin Beers, Mrs. M. W. Manning, Mrs. A. J. PERRY, Mrs. ISAAC H. CARY, Mrs. DAVID A. BOODY, Mrs. BERNARD PETERS, Mrs. MARIA HUNTING-TON ELWELL, Miss C. W. CONANT, Mrs. MARY CROXSON, Mrs. William C. Spelman and Miss Julia A. Kemp-SHALL.

#### DEPARTMENT OF MATHEMATICS.

Prof. RUFUS SHELDON, JAMES CRUIKSHANK, LL.D., ) Vice-Presidents. Prof. ISAAC E. HASBROUCK, S Prof. E. R. VON NARDROFF, GEORGE W. FRENCH.

Executive Committee.

Prof. Rufus Sheldon. JAMES CRUIKSHANK, LL.D. Prof. E. R. VON NARDROFF.

Prof. ISAAC E. HASBROUCK. GEORGE W. FRENCH. Miss Fannie I. Tolman.

President.

Secretary.

Treasurer.

CHARLES D. LARKINS.

The organization of this Department was effected on May 23d, 1890, with a membership of twenty-five. The present membership is fifty-one, a gain of two during the past year. The meetings of the Department during the season have been as follows:

Dec. 5.—Meeting to make arrangements for Institute Extension Courses in Mathematics.

Jan. 15. — Conference conducted by Principal Charles D. Larkins, of the Manual Training School on "Methods of Teaching Geometry."

May 23.—Annual Meeting. Election of officers. Arrangement of work for the season of 1894–5.

The Department of Pedagogy has held several conferences on Mathematical subjects during the year which have been of interest to the members of this Department, thereby rendering unnecessary additional meetings of the Mathematical Department.

## DEPARTMENT OF MICROSCOPY.

HORACE W. CALEF, HENRY S. WOODMAN, ARTIS H. EHRMAN, CHARLES P. ABBEY, JAMES WALKER, President.
Vice-President.
Secretary.
Treasurer.
Curator.

Executive Committee.

HORACE W. CALEF. HENRY S. WOODMAN. ARTIS H. EHRMAN. CHARLES P. ABBEY. James Walker.
Wallace G. Levison.
George E. Ashby.
Edward C. Chapman.

This Department was organized by the Brooklyn Microscopical Society in April, 1888, and is the oldest in the Institute. Its membership has increased from

sixty-eight to one hundred and forty-three. The gain in membership during the year just closed has been seven. The regular meetings are held on the second Monday evening of each month, and have been during the year as follows:

Oct. 9.—General Exhibit of Microscopic Preparations by the Members of the Department.

Nov. 13.—Description and illustration of certain methods of work in the preparation and mounting of microscopic objects by Messrs. Henry S. Woodman, James Walker and Dr. S. E. Stiles, Members of the Department.

Dec. 11.—Exhibition of Microscopic Objects, with Electric Light Projections on the Screen, by Members.

Jan. 15.—The Seventh Annual Exhibition of Microscopic Preparations and Apparatus. Sixty-four persons exhibited and sixty microscopes were in use throughout the evening.

Feb. 13.—Lecture by SMITH ELV JELLIFFE, M.D., Curator of the Herbarium of the Department of Botany, on "Microscopic Organisms of the Brooklyn Water Supply," illustrated by lantern photographs and microscopic preparations.

Mar. 12.—Lecture by Mr. Gardner D. Hiscox, Member of the Department, on "Microscope Objectives, illustrated by diagrams and charts.

April 23.—Lecture by Mr. George M. Hopkins, Member of the Department, on "Some Experiments in Polarized Light," illustrated by a series of lantern projections.

May 14.—Annual Meeting. General Exhibition of "Forms of Pond Life," by Members of the Department.

On April 7th, the Collections of the Department, which have been placed in the Bedford Park Museum, were exhibited to visitors. The meetings of the Department are informal in character, affording an opportunity for exchange of views and opinions between members.

The cabinet of the Department has been increased by donations of microscopic preparations from several members.

The Seventh Annual Exhibition of Microscopic Apparatus, Appliances and Preparations, held on January 15th, as stated above, was attended by a very large number of persons. The members who contributed to the Exhibition were: HENRY FINCKE, Prof. WM. C. PECKHAM, F. L. LATHROP, Dr. H. ENDEMANN, Dr. H. D. BLISS, G. C. W. SHIFF, Dr. H. T. HOTCHKISS, CHARLES P. ABBEY, CHARLES M. SKINNER, Dr. JOSEPH H. HUNT, GEORGE M. HOPKINS, A. A. HOPKINS, WAL-LACE G. LEVISON, Dr. H. N. HOOPLE, CHARLES E. W. HARVEY, WILLIAM FINNEY, JOHN H. ROYAEL, WALTER H. KENT, FRANK HEALY, HORACE W. CALEF, JAMES WALKER, A. H. EHRMAN, Dr. A. J. WATTS, JOHN W. FRECKELTON, Dr. H. M. SMITH, HENRY S. WOODMAN, Dr. S. E. Stiles, Edward C. Chapman, P. D. Roll-HAUS, Miss CLARA C. CALKINS, GEORGE E. ASHBY, CHARLES H. DENNISON, Rev. J. L. ZABRISKIE, Dr. SMITH ELY JELLIFFE, HENRY F. CROSBY, THOMAS C. DOUGLAS, FREDERICK KATO, HERBERT B. BALDWIN, Prof. FRANK-LIN W. HOOPER, A. D. BALEN, WILLIAM G. BOWDOIN, MARTIN H. WILCKENS, Dr. J. W. METCALF, SERENO N. AYRES, JOHN McCallum, Prof. Henry W. Schimpf, T. L. CHAPMAN, E. B. MEYROWITZ.

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The Department of Mineralogy was organized on November 21st, 1888, with twenty-eight members. The present membership is one hundred and twenty-six, a gain of six during the past season. The regular meetings are held on the third Tuesday of each month, and during the year the proceedings of the meetings have been as follows:

Oct. 17.—Exhibition of minerals collected during the summer, by members. Descriptions of Collections by their owners.

Nov. 21 to 25.—The Fourth Annual Exhibition of the Department, held in the Art Association Galleries, 174 Montague Street.

Jan. 22.—General Meeting of the members for the Exhibition and Exchange of Specimens.

Feb. 19.—Meeting at the Bedford Park Museum Building for the Examination of the Collections of the Department recently placed on exhibition.

Mar. 20.—Exhibition and Description of Calcite Minerals by Messrs. Charles L. Hatch, Wallace G. Levison and William Urban, Jr., Members of the Department.

April 10.—Special Meeting of the Members for the exchange of specimens.

April 16.—Lecture by Wallace Goold Levison, Sc.D., on "Reminiscences of the Brooklyn Institute and Some Early Collectors."

May 16.—Annual Meeting for the Election of Officers. Lecture by Prof. Daniel S. Martin, of New York, on "The Minerals and Rocks of Kings County," followed by an Exhibition of Specimens by Members.

The Fourth Annual Exhibition of the Department was held from Nov. 21st, to Nov. 25th, 1893. The Exhibit was one of unusual interest, consisting of many rare and beautiful specimens of minerals, ores, gems and precious stones. Among the contributors were Messis. John W. Freckelton, Charles M. Skinner, WILLIAM G. ROTHE, GEORGE O. SIMMONS, A. H. EHRMAN, JAMES WALKER, Dr. JOSEPH H. HUNT, WILLIAM URBAN, Jr., Dr. S. E. STILES, W. D. SCHOONMAKER, WALLACE G. LEVISON, C. H. DENNISON, Prof. DANIEL S. MARTIN, CHARLES L. HATCH, FREDERICK BRAUN, ARTHUR CHAMBERLAIN, J. A. GRENZIG, H. G. DISBROW, F. B. Jones, A. C. Bates, F. H. Pough, Frank Van DEVERG, J. CAHN, CHARLES H. PENNYPACKER and Prof. MINOR M. PADDOCK. Specimens were also displayed from the Cabinets of Members of "The Bozak Club" and from the Institute Collections.

The Collections of the Department have been increased by the purchase of excellent examples of Natrolite from Shady Side, and by donations from Prof. Franklin W. Hooper, Charles H. Dennison, J. E. Underhill, Mrs. Lewis E. Meeker and others.

The Department has placed the collections in its possession in cases in the Bedford Park Museum Building, where they have been exhibited to the public on Saturday afternoons during the past season.

During the summer months, in connection with the New York Mineralogical Club, the members of the Department held Field Meetings at points of geological and mineralogical interest, within a radius of sixty or seventy miles of the city. Among the places visited were Upper Montclair, Snake Hill and Shady Side, New Jersey; Glen Cove, Staten Island, Secaucus and Tilly Foster, New York. Numerous and valuable specimens were obtained by the members at these Field Meetings.

The Department has purchased an instrument for trimming minerals which is used by its members.

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This Department was organized on November 27th, 1891, with fifty-four members. The present membership is four hundred and eighty-five, an increase of two hundred and twenty-one during the past season. The work of the Department has included twelve regular concerts, given on Wednesday evenings, as follows:

Oct. 31.—A Concert of "Romantic Music from Many Lands," given under the direction of Mr. Frederic Reddall, by the Meistersingers, Miss Hettie Bradley and Miss Grace M. Whiting, sopranos; Mrs. Alec. Irving and Miss Jennie B. Todd, contraltos; Mr. William R. Williams and Mr. Charles H. Hampton, tenors; Mr. Frederic Reddall and Mr. E. A. Johnson, basses, and Mr. Abram Ray Tyler, accompanist.

Nov. 15.—A Chamber Music Concert was given, by the New York Philharmonic Club, assisted by Miss Marion S. Weed, soprano, with lecture by Mr. W. J. Henderson, of New York.

Dec. 6.—A Lecture-Concert on "The Development of English Church Music," under the direction of Mr. R. Huntington Woodman. The lecture was given by Rev. Charles Cuthbert Hall, D.D., and the concert by the Choir of the First Presbyterian Church: Mrs. Charles Tyler Dutton, soprano; Miss Antoinette Cook, contralto; Mr. Charles Tyler Dutton, tenor; Mr. Royal Stone Smith, bass, assisted by a chorus of thirty voices.

Dec. 27.—Lecture-Concert on "The Ballad and the Madrigal." The lecture was given by the Rev. Stephen H. Camp, the Concert by the English Glee Club and the Dudley Buck Quartette, under the direction of Mr. John Hyatt Brewer, pianist.

Jan. 24.—A Concert of "Choral Music," by the Arion Society, assisted by Miss Tirzah P. Hamlen, alto; Mr. Victor Herbert, cello; Mr. Alex. Rihm, accompanist, and Mr. John Hyatt Brewer, organist. Musical director, Mr. Arthur Claassen.

Feb. 7.—Lecture-Concert on "American Music." The lecture was given by Mr. Charles M. Skinner, and the musical illustrations by the Beethoven String Quartette, assisted by Mr. H. E. H. Benedict, piano, Mrs. Grace Haskell Barnum, soprano, and Mr. Joseph Wyro Kilduff, baritone.

Feb. 28.—A Piano Recital by Mr. Emil Liebling, of Chicago, assisted by Mme. Lillian Blauvelt, of New York, soprano.

Mar. 10.—"Russian Peasant Wedding Music," a Musical Folk-Drama, with characteristic costumes,

ceremonies, folk-songs and dances, by a chorus of thirty Russian Peasants, under the direction of Madame Eugenie Papritz-Lineff.

Mar. 21.—"An Evening with Tennyson," consisting of Ballads, Glees and Madrigals by the English Glee Club, assisted by Miss Laura Sedgwick Collins, reader, and Mr. Abram Ray Tyler, accompanist. Mr. Frederic Reddall, Director.

April 9.—A Concert of "Chamber Music" by the Kneisel Quartette, of Boston, assisted by Miss Myrta French, soprano.

May 2.—A Lecture and Concert on "The Development of Secular Choral Music." The lecture was given by Mr. Louis C. Elson, of Boston, and the musical numbers were rendered by Miss Annie Wilson, soprano; Miss Julia May, alto; Messrs. Sidney Taylor and Henry L. Case, tenors; Messrs. Frederic Gillette and Robert H. Stanley, basses, and a chorus of forty-five voices from the Choir of Plymouth Church. Mr. Charles H. Morse, Director.

May 29.—"Types of National Music," by the Schubert Philharmonic Club, assisted by Mrs. G. Dannreuther, pianist, and Mrs. E. Theile, soprano.

In addition to the regular course of twelve concerts, six extra concerts were given, as follows:

Oct. 18.—An Organ Concert by M. Alexandre Guilmant, K.C.I.E., organist of La Trinité, Paris, on the great organ of the New York Avenue M. E. Church.

Dec. 13.—An Organ Concert by Mr. Clarence Eddy, of Chicago, Organist at the World's Columbian Expo-

sition, assisted by Mr. Frederick Dean, Lecturer, and Miss Myrta French, soprano, of New York. The concert was given in the New York Avenue M. E. Church.

Mar. 10.—A Matinée Concert of Russian Peasant Wedding Music, by a chorus of thirty Russian Peasants, under the direction of Mme. Eugenie Papritz-Lineff.

Feb. 28.—A Matinee Piano Recital by Mr. EMIL LIEBLING, of Chicago, assisted by Miss Julia F. May, contralto.

April II.—A Piano Recital was given by Mrs. Helen L. Robinson, of New York, on "The Development of Modern Opera." The recital was accompanied by explanatory lecture notes.

May 18.—By the courtesy of the Emanuel Baptist Church, an Organ Concert was generously presented to the members of the Institute on the evening of April 28th; Mr. G. Waring Stebbins, organist, assisted by Miss M. Kathryn Krymer, contralto, and Mr. W. F. Tooker, tenor.

The concerts given by the Department have served two purposes in music, (1) the presentation of the best musical compositions by the best musical talent, and (2) instruction concerning the aims and purposes for which different classes of music have been composed, and concerning the means by which the composer has reached his results.

The average attendance at the eighteen concerts has been over 1,400 persons, or 25,200 for the season.

In order to meet the large expenses connected with the concerts, and also to prevent the overcrowding of the auditorium in which the concerts are given, admission was by Reserved Seat Tickets. These were purchased by Members of the Institute at a nominal price of twenty-five or fifty cents for a single concert, or \$3.00 for the course of twelve Wednesday evening concerts. When all the seats are not taken by Members, non-members are allowed to purchase them at \$1.00 a concert. The entire receipts from the sale of reserved seats during the past season were \$4,380, and the entire expenses of the concerts \$4,324.

Owing to the greatly increased membership of the Institute, and to the increasing interest in the work of this Department, each of the concerts in the regular course will be given both on Wednesday afternoon and Wednesday evening. This plan, it is believed, will enable all who wish to attend the concerts to secure reserved seats.

As the increased resources of the Department enabled it to provide an unusually attractive and valuable course of concerts during the season of 1893-4, the Executive Board, anticipating a continued growth of interest in music, has arranged for concerts to be given during the season of 1894-5 by more expensive talent than the Department has heretofore been able to secure.

The Department is particularly indebted to the Trustees and members of the New York Avenue M. E. Church for the use of its edifice and organ at the concerts given by M. ALEXANDRE GUILMONT, of Paris, on October 18th, and by Mr. CLARENCE EDDY, of Chicago, on December 13th; to the Trustees and members of the Emanuel Baptist Church, for the use of its building

on the evening of May 18th, and for the concert by Mr. G. Waring Stebbins, organist; Miss M. Kathryn Krymer, contralto, and Mr. W. F. Tooker, tenor, presented to the Members of the Institute by the church; and to Mrs. Helen G. Robinson, of New York, for the Piano Recital given by her on April 11th.

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The Department of Painting was organized on May 26th, 1890, with forty-four members. The present membership is ninety-four, a gain of five during the year. The proceedings of the meetings of the Department have been devoted to promoting the interests of the Brooklyn Art School, which has been established and conducted in conjunction with the Brooklyn Art Association for the purpose of furnishing thorough courses of instruction in drawing, painting, modeling, composition and perspective. The studio work of the School comprises classes in Drawing from the Antique, in Still Life, in Portrait Painting, in Drawing and Painting from Life, in Modeling from the Cast and from Life, in Perspective Drawing and in Sketching. The classes are conducted by the same methods as those pursued by the best Art Schools in Europe and the Art Students' League in New York. Especial advantages are offered to artists and advanced students in the study and practice of composition. A room devoted to this purpose enables students to begin and carry forward their compositions under the advice and criticism of the instructor. The Life Class Rooms and Portrait Class Rooms are especially large, and all the rooms are abundantly lighted and well ventilated.

The location of the School in the Ovington Building, on Fulton and Clark streets, near the terminus of the Brooklyn Bridge and the ferries, renders it easily accessible from all parts of Brooklyn and New York, and from Jersey City by the Annex Boat. The School offers particular advantages to students coming from other sections of the country, as living expenses are comparatively low in Brooklyn.

The instructors of this school are Mr Walter Shirlaw in the composition and life classes, Mr. William M. Chase in the still-life and portrait classes, Mr. J. Massey Rhind in the modeling and sculpture classes, Mr. Joseph H. Boston in the antique classes and the sketch classes, Miss Elizabeth R. Coffin in the class in perspective drawing, and Mr. William H. Snyder, assistant.

The Department has furnished a large number of Casts for the classes, and has contributed to the pecuniary support of the School. A students' organization has been maintained for the purpose of promoting the interests of the students. The number of students in the Art School during the year was one hundred and thirty-two.

For the purpose of providing the best Art instruction during the summer months at moderate rates, the Department has joined in the support of The Shinne-cock Hills Summer School of Art, under the direction of Mr. William M. Chase, located at Southampton-by-the-Sea, and has also established

the Catskill Summer School of Art, under the direction of Mr. Theodore Robinson, located during its third season at Evelyn College, near Princeton, New Jersey, and the Lyme School of Art, under the direction of Mr. Joseph H. Boston, at Lyme, Conn., near the Sound and the Connecticut River. Circulars giving full particulars concerning the facilities for instruction and the accommodations for living at the Schools are published by the Department.

The Second Annual Exhibition of the work of Students of the Art School and of the Summer Schools of Art was given in the Galleries of the Art Association from November 11th to 18th inclusive. The exhibition contained about four hundred examples selected by the instructors from the work of their several classes.

A Spring Exhibition of the work of the Art School during the season of 1893-4 was held from May 10th to 16th. Interest in this Exhibition, as also in the Autumn one, was increased by works of the instructors in the School, Messrs. Chase, Shirlaw, Robinson and Boston, and Miss Coffin. The attendance at the Autumn exhibit was twenty-seven hundred, and at the later one twenty-two hundred.

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#### W. T. B. S. IMLAY, Chairman.

CHARLES R. ABBOT, Pd.D. Frank B. Stevens.

Miss Mary E. Brooks. F. W. Mar.

Mrs. Martha J. Minshull. Miss Emily Fuller.

## Reading Circles.

## Miss Isobel Camp, Pd.D., Chairman.

Rev. Lyman Abbott, D.D.
Prof. E. E. Wentworth.
Miss Ordelia A. Lester.
Miss Emma L. Johnston.
Miss Lucilla E. Smith.

Rev. John W. Chadwick.
William T. Vlymen, Ph.D.
Mrs. Franklin W. Hooper.
Mrs. Lucy T. Lewis.
Frank B. Stevens.

The Department of Pedagogy was organized on February 26th, 1892, with a membership of one hundred and fifty-eight. Its present membership is four hundred and fourteen, a gain of seventy-one during the year.

The purpose of the Department, as expressed in its Constitution, is "to promote knowledge of the science and the art of education." The work of the Department comprises:

- 1. Addresses on educational questions of large and general import.
- 2. General courses of lectures on subjects in the curricula of studies and on the methods of teaching.
- 3. Systematic courses of lectures, with directions for reading and study.
  - 4. Conferences and object lessons in teaching.
  - 5. The establishment of a Library of Pedagogy.
- 6. The formation of a Pedagogical Museum as a part of the Museum of Arts and Sciences.

The work as above designated is conducted under the direction of the Executive Board, by the following standing committees:

- 1. Committee on Lectures.
- 2. Committee on Educational Literature.
- 3. Committee on Library.
- 4. Committee on Educational Psychology.
- 5. Committee on Hygiene and Physical Training.
- 6. Committee on Kindergarten.
- 7. Committee on Manual Training.
- 8. Committee on Art Education.
- 9. Committee on Teaching Music.

- 10. Committee on the History of Education.
- 11. Committee on Methods of Education.
- 12. Committee on Pedagogical Museum.

Each committee has regularly appointed meetings for the consideration of matters pertaining to its own individual work, and members are cordially invited to become active members of such committees as they may elect. An account of the work done by the Department and its several committees (or sections) during the past year is given below.

#### GENERAL MEETINGS OF THE DEPARTMENT.

A course of three lectures on "The History of Education," by President James MacAlister, LL.D., of the Drexel Institute, Philadelphia, was given on the following dates and subjects:

Nov. 18.—"Comenius, the Founder of Educational Method"

Nov. 25.—" Pestalozzi, the Apostle of Educational Reform."

Dec. 2.—"Froebel, the Philosopher of Childhood."

The Special Lectures delivered before the Department were as follows:

Dec. 7.—Lecture by Prof. John F. Woodhull, of the Teachers' College, New York City, on "The New York State Exhibit of Home-made Apparatus at the World's Fair."

Dec. 21.—Lecture by Dr. Melvil Dewey, Secretary of the State Board of Regents, on "Educational Interests and Library Extension in New York State."

Jan. 18.—A Lecture by the Rev. Lyman Abbott, D.D., on "Reading and Reading Circles," held at the Adelphi Academy.

Jan. 25.—Lecture by Prof. John F. Woodhull, of the Teachers' College, N. Y., on "An Ideal Pupil."

April 10.—A Lecture was given before the Departments of Pedagogy and Philology by Albert C. Perkins, Ph.D., President of the Classical Section of the Department of Philology, on "Emerson as a Teacher."

The COMMITTEE ON METHODS OF EDUCATION, Prin. A. G. MERWIN, Chairman, was divided into Sub-committees, to which was assigned the consideration of the following subjects, respectively: Methods in General, Mathematics, Geography, History, Grammar, Reading, Penmanship, School Organization and Discipline, Elementary Science, and Physical Culture.

The Sub-committees held during the season seventynine meetings or conferences. At each meeting a paper or an address, occupying from thirty to forty minutes, was presented by some member of the Department. The subject of the paper was then freely discussed by a large number of those present. The average attendance at these conferences was eightyseven. The dates, the subjects and the authors of papers that were presented to the conferences were as follows:

#### METHODS OF TEACHING MATHEMATICS.

Oct. 11.—Paper No. I., by Principal Wm. B. RIDENOUR, on "Methods of Teaching Arithmetic."

Oct. 18.—Paper No. II., by Principal Wm. B. Ridenour, on "Methods of Teaching Arithmetic."

Oct. 25.—Paper by Associate Supt. John H. Walsh, on "Methods of Teaching Algebra as an aid to Arithmetic."

Nov. I.—Paper by Principal Channing Stebbins, on "Inventional Geometry: What is its use? How Should it be Presented?"

#### METHODS OF TEACHING HISTORY.

Nov. 8.—Paper by Miss Ellen A. Moriarty, Head of Department, P. S. No. 18, on "How we can Teach History in Grammar Classes."

Nov. 15.—Paper by Miss Isobel Camp, Pd.D., on "Civil Government in the Grammar School."

#### METHODS OF TEACHING GEOGRAPHY.

Nov. 22.—Paper by Miss Lucilla E. Smith, of the Brooklyn Training School, on "Weather Observations, a Preparation for Physical Geography."

Dec. 6.—Paper by Miss Emily Fuller, of the Girls' High School, on "Methods of Teaching Geography: Atmospheric Water and Condensation."

Dec. 13.—Paper by Mrs. Martha J. Minshull, Head of Department, P. S. No. 44, on "Graphic Geography."

#### METHODS OF TEACHING PENMANSHIP.

Feb. 21.—Paper by Principal Joseph V. Witherbee, of Public School, No. 24, on "Vertical Writing."

Feb. 28.—Paper by Principal John H. Haaren, of Public School, No. 10, on "Movement in Writing."

#### METHODS OF TEACHING READING.

Oct. 4.—Paper by Miss Agnes E. De Monde, on "Methods."

Jan. 24.—Paper by Miss Jessie H. Bancroft, Superintendent of Physical Culture in the Brooklyn Public Schools, on "The Physical Basis of Reading."

Jan. 31.—Paper by Assoc. Supt. Edward G. Ward, on "Methods of Teaching Beginners to Read."

Feb. 7.—Paper by Miss CAROLINE B. LE Row, of the Girls' High School, on "The Correction of Common Errors in Reading."

Feb. 14.—Paper by Miss Emily G. Bridgham, of Public School, No. 3, on "The Critical Reading of Bryant."

#### SCHOOL ORGANIZATION AND DISCIPLINE.

Mar. 7.—Paper by Principal Walter B. Gunnison, Ph. D., on "Individual Instruction in Graded Schools."

Mar. 14.—Paper by Principal James Cusack, on "Limitations to a Teacher's Work in a Graded System."

Mar. 21.—Paper by Principal WILLIAM L. FELTER, on "Reciprocal Relations between Principal and Teacher."

Mar. 28.—Paper by Principal WILLIAM T. VLYMEN, Ph.D., on "Class Discipline."

#### ELEMENTARY SCIENCE TEACHING.

A Course of four Lectures was given by Prof. John F. Woodhull, of the Teachers' College, New York

City, before the Departments of Pedagogy and Physics, on the following dates and subjects:

Oct. 12.—" The Pyramid of Light."

Oct. 26.—" Shadows."

Nov. q.—" Plane Mirrors."

Nov. 22.-" Curved Mirrors."

Each lecture was illustrated by exercises with apparatus placed in the hands of each Member taking the course.

April 4.—Paper by MINER H. PADDOCK, M.A., of the Jersey City High School, on "The Teaching of Mineralogy in the Sixth Grammar Grade," illustrated by collections of minerals.

April II.—Paper by Principal Edward P. Crowell, on "The Teaching of Zoölogy in Primary and Lower Grammar Grades."

April 18.—Paper by Prof. George C. Sonn, of the Newark High School, on "Methods of Teaching Physics in the Fourth and Fifth Grammar Grades."

April 25.—Paper by Mr. CLARENCE E. MELENY, of the Teachers' College, New York, on "The Report of the Committee of Ten on Natural History."

May 8.—Paper by Principal Mary B. Dennis, Ph.D., on "The Report of the Committee of Ten on Elementary Science Teaching."

#### MANUAL TRAINING.

Oct. 5.—Meeting of those interested in organizing a section of Manual Training.

Dec. 19.—Address by Prof. Felix Adler, of New York, on "Manual Training as an Element in Modern Culture."

Jan. 4.—Lecture by Mr. C. A. Bennett, of the Teachers' College, New York, on "Manual Training for the Grammar Grades."

Feb. 1.—Lecture by Mr. Gustaf Larsson, of the Sloyd Manual Training School, Boston, on "Sloyd in Grammar Schools."

Mar. I.—Lecture by Mr. W. L. SAYRE, on "The Nature and Methods of the Manual Training High School."

April 12.—Paper by Miss Harriet S. Sackett, of the Pratt Institute, on "The Girls' Side of Manual Training."

#### EDUCATIONAL PSYCHOLOGY.

Oct. 12.—Meeting of the Members of the Departments of Pedagogy and Psychology, to organize the Sub-section of Educational Psychology.

A Course of five Lectures, by Prof. Josiah Royce, Ph.D., of Harvard University, on "Topics in Psychology of Interest to Teachers." The subjects and dates were as follows:

Oct. 14.—"The Psychology of Imitation, from the Teacher's Point of View."

Oct. 21.—" The Psychology of Imitation, from the Teacher's Point of View" (continued).

Oct. 28.—"Apperception and the Theory of the Orderly Acquisition of Ideas."

Nov. 4.—"The Psychology and Training of Self-Consciousness."

Nov. 11.—"A Due Regard for Varieties of Individual Temperament."

Oct. 10.—Conference conducted by Miss A. E. Johnson, Chairman of the Committee on Infant Development.

Nov. 12.—Address by Eliza Mosher, M.D., on "The Nervous System of the Infant."

Dec. 14.—Conference conducted by Superintendent William H. Maxwell, Ph.D., on "The Systematic Study of School Children."

Jan. 11.—Paper by President Walter L. Hervey, Ph.D., of the Teachers' College, New York, on "The Psychology of the Kindergarten," illustrated.

Feb. 8.—Paper by Prof. John F. Reigart, of the Teachers' College, New York, on "How Shall We Teach School Children to Think?"

Mar. 8.—Paper by Jerome Walker, M.D., on "Ailments of Children."

May 16.—Paper by Mrs. Franklin W. Hooper, on "The Reflex of School Life on the Home Life of Children."

May 10.—Conference in conjunction with the Department of Psychology, conducted by Edgar D. Shimer, Ph. D., of the University School of Pedagogy, on "The Traits of Children as Revealed by Physical Signs."

During the season this Section has held seven public conferences, and two round-table discussions, open only to members of its committees. So far, effort has been directed chiefly toward prosecuting the work of child-study, which was begun last year by an investigation of children's interests, carried on under the direction of President Hervey and Prof. Reigart, of the New York Teachers' College.

Ten subjects of special inquiry were chosen by members of the committee, who were appointed chairmen of as many sub-committees, to be responsible for directing the work of students and for gathering trustworthy records of observation. During the present year each sub-committee has made some definite contribution to the work of the Section. Six of the chairmen have conducted conferences, and four of the committee have been especially successful in gathering material of value to students of psychology.

The Committee on Infant Development provided an illustrated lecture by Dr. Mosher, upon the "Nervous System of the Infant." Observations upon young children are received regularly from several mothers.

The Committee upon Exceptional Children has obtained a set of very valuable studies, made by teachers upon children exhibiting mental peculiarity or defect.

The Committee on School Life as Reflected in the Home, is engaged in gathering, unknown to the children, notes of such sayings and doings as show direct results of the teachers' discipline and instruction.

The Committee on Children's Ideals is preparing for public presentation, a report upon a thousand statements received from children in public and private schools, the significance of such statements lying in their unconscious revelation of the child's point of view and his mode of thought. The Section is in communication with Clark University, and with several Corresponding Members who kindly send in material from outside sources.

#### ART EDUCATION.

Oct. 19.—Lecture by Prof. Walter S. Perry, of the Pratt Institute, on "The Art and Educational Exhibits of the World's Fair; How can we Secure a Higher Appreciation of True Art?"

Nov. 16.—Lecture by Miss Stella Skinner, Supervisor of Drawing, New Haven, on "Art Education in Primary Schools."

Dec. 21.—Lecture by Miss Katharine Shattuck, of the Normal Art Department of the Pratt Institute, on "Art Education in Grammar Schools."

Jan. 18.—Conference on "Art Education in the High Schools and Academies:" Paper by Prof. A. H. FLINT, of the Polytechnic Institute, on "Construction Drawing;" by Miss H. E. HERRICK, of the Teachers' College, N. Y., on "Representation;" by Mr. VICTOR I. SHINN, of Pratt Institute, on "Decoration."

Feb. 15.—Lecture by Mr. Leslie W. Miller, Principal of the School of Industrial Art of the Pennsylvania Museum, on "Our American Art Schools and their Outlook."

March 15.—Lecture by Mrs. Mary Dana Hicks, of Boston, on "Color in Art Education," illustrated by examples in color.

April 19.—Lecture by Prof. Langdon S. Thompson, Director of Drawing, Jersey City, on "The Decoration of Public School Rooms,"

May 17.—Lecture by Miss Jessie Van Brunt, of the Packer Institute, on "The History of Art as a Subject of Education," illustrated by lantern slides.

#### THE KINDERGARTEN SECTION.

Oct. 26.—Paper by Miss Hannah D. Mowry, of Pratt Institute, on "The Kindergarten Exhibits of the World's Fair."

Nov. 23.—Paper by Pres. Walter L. Hervey, Ph.D., of the Teachers' College, N. Y., on "The Psychology of the Kindergarten."

Feb. 24.—Address by Inspector James L. Hughes, of Toronto, Canada, on "The Relation of the Kindergarten to the Public Schools."

March 22.—Lecture by Mr. Hamilton W. Mabie, Associate Editor of *The Outlook*, on "The Creative Elements in Education."

April 26.—Paper by Miss Alice E. Fitts, of the Pratt Institute, on "Children's Games," and by Miss of the Brooklyn Training School for Teachers, on "

May 24.—Paper by Miss Alice E. Fitts, of the Pratt Institute, "Plays and Games," illustrated by the members of the Training Class of the Pratt Institute.

#### THE MUSIC SECTION.

Dec. 18.—Paper by Mr. John J. Dawson, Director of the Kings County Tonic-Sol-Fa Society, on "The Teaching of Sight-Singing Classes."

Jan. 29.—Paper by Miss Sara J. J. McCaffery, Instructor of the Damrosch Vocal Classes, N. Y., on "Music for the Masses."

Feb. 19.—Paper by Mr. John J. Dawson, on "The Tonic-Sol-Fa System."

March 19.—Paper by Miss Mary Kennedy, on "The Tonic-Sol-Fa," illustrated by a class of children.

April 23.—Paper by Mr. Frank H. Damrosch, of N. Y., on "Popular Music. Where and How to Teach it."

#### THE LANGUAGE SECTION.

Dec. 20.—Paper by Mrs. Franklin W. Hooper, on "Home Aids to the Use of Language."

Jan. 3.—Paper by Miss Ordelia A. Lester, of the Adelphi Academy, on "Some Ways of Teaching Composition."

Jan. 10.—Paper by Principal Frank L. Green, on "Conjunctive Pronouns and Subordinating Conjunctives."

Jan. 17.—Paper by Supt. WILLIAM H. MAXWELL, Ph. D., on "The Correction of Compositions."

#### SECTION ON PHYSICAL CULTURE.

A special course of instruction in Physical Culture was given on successive Wednesday afternoons, beginning February 14th, by Miss Eleanor E. Prétat, of New York, under the direction of Miss Jessie H. Bancroft, Chairman of the Section. The lessons began at four o'clock, and occupied an hour. The course was open only to ladies, and was given in the Art Building, 174 Montague street. The fee for the course was \$3, and the class was limited to forty persons.

The Committee on Pedagogical Library, Mr. John H. Walsh, Chairman, has brought together a library

of three hundred and ninety volumes on Pedagogy, and has made arrangements for the continual increase of the library, and the classification and cataloguing of its contents. The library has been placed in the room assigned to the Department of Pedagogy, in the temporary Museum Building, in Bedford Park, and may be consulted on days when the Museum is open.

The Committee on Pedagogical Museum, Dr. James Cruikshank, Chairman, has issued a circular which explains the character of the Museum which it is proposed to establish, and has asked for donations of material that will be valuable in illustrating the history of education.

The Standing Committee on the History of Education, Miss Sarah E. Scott, Chairman, was instrumental in securing the Lectures by President MacAlister, of the Drexel Institute, Philadelphia, which are described on page 166.

The Annual Meeting of the Department was held on May 9th, at which the Secretary, Mr. Harry F. Towle, presented, on behalf of the several committees of the Department, a report of their work, and at which the officers and members of the Executive Board for the coming year were elected.

## DEPARTMENT OF PHILOLOGY.

Prof. Brainerd Kellogg, President.
WILLIAM H. MAXWELL, Ph.D.,
Prof. R. J. H. Gottheil, Ph.D.,
Prof. J. W. Abernethy, Ph.D. Corresponding Secretary.
Miss Emily G. Bridgham, Secretary.
Walter B. Gunnison, Ph.D.,
Treasurer.

#### Executive Committee.

Prof. Brainerd Kellogg. William H. Maxwell, Ph.D. Prof. Charles Sprague Smith. Prof. J. W. Abernethy, Ph.D. Walter B. Gunnison, Ph.D.

Prof. R. J. H. Gottheil, Ph.D. Prof. Henri Michaud.
Prof. Secundo Marchesio.
Prof. H. E. Northrop.
Miss Emily G. Bridgham.

## Committee on English Language.

Prof. Brainerd Kellogg. William H. Maxwell, Ph.D. Prof. A. V. W. Jackson, Ph.D. Miss Ordelia A. Lester. JAMES CRUIKSHANK, LL.D. Prin. JOHN H. HAAREN, Miss CAROLINE B. LE ROW. Miss EMILY G. BRIDGHAM.

## Committee on English Literature.

Prof. J. W. Abernethy, Ph.D. Truman J. Backus, LL.D. Mr. Percival Chubb. Miss Christina Rounds.

Rev. John W. Chadwick. Walter B. Gunnison, Ph.D. Prof. E. E. Wentworth. Miss Josephine E. Hodgdon.

#### Committee on French Language and Literature.

Prof. Henri Michaud.
Prof. Benjamin D. Woodward.
Mrs. Walter S. Carter.

Prof. A. Laurent de Villeroy. Miss Louise Both-Hendriksen. Mrs. R. J. H. Gottheil.

## Committee on German Language and Literature.

Prof. H. E. NORTHROP.
Prof. HENRY ZICK, Ph.D.
Prof. MENCO STERN.

Prof. Frederick W. Grube. Prof. Carl Leisz. Prof. Joseph Deghueé.

## Committee on Italian Languages and Literature.

Prof. Secondo Marchisio. Prof. Thomas Davidson, Mrs. Charles Auel.

Prin. JOHN H. HAAREN. Miss Matilda McLean. Mrs. Maria H. Elwell.

Miss S. E. Waldo.

## Committee on Oriental Languages and Literatures.

Prof. R. J. H. GOTTHEIL, Ph.D. Rev. J. C. Ager.

Prof. A. V. W. Jackson, Ph.D. Rev. John P. Peters, Ph.D.

Miss J. E. Orr.

Prof. Edward D. Perry, Ph.D.

Committee on Scandinavian Language and Literature.

Prof. Charles Sprague Smith. Prof. Benjamin D. Woodward. / Miss Louise Both-Hendriksen.

The Department of Philology was organized on January 14th, 1891, with ninety-two members. The present membership is eight hundred and seventy-nine, a gain of one hundred and ninety-seven during the year. The work of the Department has been conducted by the various standing committees of the organization, under the direction of the Executive Committee. The meetings and lectures of the Department and its various sections during the year have been as follows:

#### THE ENGLISH LITERATURE SECTION.

I. A course of six Lectures, on "William Cullen Bryant," was given by Prof. Mary A. Jordan, of Smith College, on Tuesday afternoons, as follows:

Oct. 3.—"The Formative Influences in the Life of Bryant."

Oct. 10.—"Bryant, the Citizen."

Oct. 17.—" Bryant, the Editor."

Oct. 24.—"Bryant, the Man of Culture."

Oct. 31.—" Bryant, the Poet."

Nov. 7.—"The Place of Bryant in Literature and in History."

II. A course of four Lectures, on Nathaniel Hawthorne," was given by Mr. George Parsons Lathrop, of New London, on Friday afternoons, as follows:

Oct. 6.—" Hawthorne's Short Stories."

Oct. 13.—"His Character and Career; His Note Books and His First Romances."

Oct. 20.—"The Marble Faun and Later Writings."

Oct. 27.—"Hawthorne's Influence on Literature."

A course of seven Lectures, on "The Literary Life of the XVIth and XVIIth Centuries," was given on Tuesday afternoons, by Prof. Francis H. Stoddard, M.A., of the University of New York, as follows:

Jan. 9.—"General Survey of the Men and Writings of the Two Centuries."

Jan. 16.—" Macchiavelli, Savonarola, and the Humanists of the Age of Despots."

Jan. 23.—"The Ethical Writers: Bacon, Montaigne, Pascal, Sir Thomas Browne, La Rochefoucauld."

Jan. 30.—"The Religious Writers: Fénelon, Bossuet, Calvin and Taylor."

Feb. 6.—"The Religious Plays: Their Relation to the Early Elizabethan Drama."

Feb. 13.—" The Epics of the Period."

Feb. 20.—"The Romances of the Period: Moore's 'Utopia,' Sidney's 'Arcadia' and Bacon's 'New Atlantis."

IV. A course of six Lecture-Readings from Browning's, "The Ring and the Book," was given by Mrs. HARRIET OTIS DELLENBAUGH, of New York, as follows:

Feb. 27.—"The Ring and the Book."

Mar. 1.—"Count Guido Franceschini."

Mar. 6.—"Guiseppe Caponsacchi."

Mar. 9.—" Pompilia."

Mar. 13.—"The Pope."

Mar. 16.—"The Book and the Ring."

V. A course of six Lectures, on "The Literature of the Psalms," by Dr. John P. Peters.

Mar. 20.—"The Forms of Hebrew Poetry, Lyric Poems, Comparison of Hebrew and Babylonian Poetry."

Mar. 27.—"The Psalter, the Hymn Book of the Jewish Church; Its Growth."

April 3.—"The Earliest Poetry in the Psalter; Relation of David to the Psalter."

April 10.—"The Poetry of the Captivity; The Influence of the Exile and the Return."

April 17.—"Poems of the Persian and Greek Periods. The Influence of the Maccabees on the National Life and the Psalter. The Psalter of Solomon."

April 24.—"Gems of the Hebrew Psalter. The Psalter of the Pilgrims and the Sons of Korah. The Beauty of Hebrew Lyric Poetry and Greek Lyric Poetry Compared."

VI. A course of Readings from Shakespeare by Mr. Locke Richardson, was given on Saturday evenings, as follows:

Nov. 3.—"King Lear."

Nov. 10.—"Julius Cæsar."

Nov. 17.-" Henry IV."

Nov. 24.-" Merchant of Venice."

Dec. 1.-" Othello."

Dec. 8.—"The Winter's Tale."

In order to accommodate all who desired to attend, these Readings were repeated on Friday afternoon, November 2d, 9th, 16th, 23d, 3oth and December 7th.

VII. A course of six Readings from Shakespeare and Goethe, by Mr. George Riddle, of Cambridge, on Saturday evenings, as follows:

Jan. 20.—"A Midsummer Night's Dream," with orchestral music (Mendelssohn).

Jan. 27.—" Anthony and Cleopatra."

Feb. 3.—"Lucrezia Borgia," with orchestral music (Donizetti).

Feb. 10.—"The Tempest."

Feb. 17.—" Macbeth."

Feb. 24.—"Faust," with orchestral music (Gounod).

The demand for admission to these Readings was so great, that they were repeated on Friday afternoon, January 19th, 26th, February 2d, 9th, 16th and 23d. The orchestral music by the Schubert Philharmonic Club, of New York. Mr. Gustav Dannreuther, Conductor.

VIII. A course of nine lectures by Mr. Percival Chubb, on "Selected Masterpieces in Literature," on Friday afternoons, with subjects and dates, as follows:

Mar. 23.—" Marlowe's Doctor Faustus."

Mar. 30.—"Shakespeare's Hamlet" (new reading).

April 6.—" Milton's Comus."

April 13.—" Wordsworth's Prelude."

April 20.—"Shelley's Prometheus Unbound."

April 27.—"Tennyson's In Memoriam."

May 4.—" Browning's Colombe's Birthday."

May II.—"Arnold's Empedocles on Ætna."

May 18.—Morris' Story of Sigurd, the Volsung."

In addition to the above courses on English Literature, which were open to all the members, two courses of Institute Extension Lectures on Literature were given. At these lectures directions for reading and study were given, and opportunity for a conference followed each lecture.

The first of these courses was given by Mr. Percival Chubb, on Thursday mornings, at 10:30 o'clock. The dates and subjects were as follows:

Nov. 16.—"Thought and Culture Before the Revival."

Nov. 23.—"The New Tendencies and their Causes."

Dec. 7.—" European Influences: Wordsworth, Carlyle, etc."

Dec. 14.—" European Influences: German and French Thought."

Dec. 21.—" Emerson: His Earlier Work and Thought."

Dec. 28.—"Transcendentalism and its Leading Representatives.

Jan. 4.—"Social Aims and Experiments: Brook Farm, etc."

Jan. 11.—" Philosophy and Religion."

Jan. 18.--" Ethics in Theory and Practice."

Jan. 25.-" Literature, Art and Criticism."

Feb. 1.—" Emerson, Margaret Fuller and Thoreau."

Feb. 8.—" Influence and Outcome of the Movement."

A course of sixteen lectures and conferences was given by Mrs. Abby Sage Richardson, of New York, on "Shakespeare." The subjects and dates were as follows:

Jan. 9.—" Shakespeare in Stratford-on-Avon."

Jan. 16.—"Shakespeare in London."

Jan. 30, Feb. 6 and 3.—"The Merchant of Venice."

Feb. 20, 27 and Mar. 6 .-- "Macbeth."

Mar. 13, 20, 27 and April 3.—"Hamlet."

April 10, 17, 24 and May 1 .-- "King Lear."

#### FRENCH LANGUAGE AND LITERATURE.

A course of four lectures by Prof. A. Laurent de Villeroy, on "Hommes Politiques et Journalistes Français."

April 2.—"Le Journal—Ses Origines et Ses Transformations."

April 9.—" Le Journalisme : Défauts et Qualités des Ecrivains."

April 26.-- "Advantages et Dangers du Journalisme."

April 23.—" Etude sur les Principaux Journalistes Français: Thiers, Lamartine, Jouffroy.

The following special lectures were also given before the French Section: Dec. 27.—Lecture by Prof. Henri Michaud, on "Racine."

Jan. 3.—Lecture by Prof. Henri Michaud, on "Racine," concluded.

Jan. 8.—Lecture by Mrs. RICHARD J. H. GOTTHEIL, of New York, on "Madame de Staël et d'autres femmes écrivains au Siècle."

Jan. 23.—Lecture by Miss Lucie Kennedy, of New Orleans, on "M. Henri Taine."

There were also given two courses of Institute Extension Lectures in French Literature. These lectures were given in French, and at a conference held at the close of each lecture directions for reading and study were recommended.

The first course was by Prof. HENRI MICHAUD, of the Brooklyn Heights Seminary, Chairman of the Section, on "Molière and Racine."

The subjects considered at the several sessions were as follows:

#### I.—MOLIERE.

*Ist Lecture*.—Molière. Les premières pièces. L'Etourdi. Le Dépit amoureux. Les Précieuses ridicules. Sganarelle.

2d Lecture.—Don Garcie de Navarre. L'Ecole des Maris. Les Fâcheux. L'Ecole des Femmes. La Critique de l'Ecole des Femmes.

3d Lecture.—L'Impromptu de Versailles. Le Mariage forcé. La Princesse d'Elide. Don Juan. L'Amour médecin.

4th Lecture.—Le Misanthrope. Le Médecin malgré lui. Le Sicilien. La Tartuffe. Amphitryon.

5th Lecture.—George Dandin. L'Avare. Monsieur de Pourceauynac. Les Amants Magnifiques. Le Bourgeois Gentilhomme.

6th Lecture.—Psyché. Les Fourberies de Scapin. La Comtesse d'Escarbagnas. Les Femmes savantes. Le Malade imaginaire.

#### II.—RACINE.

7th Lecture.—Racine. La Thébaide. Alexandre le Grand. Andromaque. Les Pladeurs. Brittannicus.

8th Lecture.—Bérénice. Bajazet. Mithridate. Iphigénie. Phèdre.

9th Lecture.—Esther. Athalie. Poésies diverses. 10th Lecture.—Oeuvres diverses en prose.

The second course was given by Miss Louise Both-Hendriksen, Institute Lecturer on the History of Modern Art, on Monday afternoons, with subjects and dates as follows:

## I.—Alfred De Musset.

Jan. 15.—{ Principles of French Versification. La Nuit de mai.

Jan. 22.—Nuit de décembre. Espoir en Dieu. Rappelle toi.

Jan. 29.—Souvenir. Tristesse. A Lamartine.

#### II.—LAMARTINE.

Feb. 5.—Le Lac. A Byron. A Bonaparte.

Fcb. 12.—Le Désespoir. La Prière de Femme.

Feb. 19.-Les Révolutions.

#### III.—VICTOR HUGO.

Feb. 26.—Mon Enfance. Le Feu du Ciel. Les Djinns.

March 5.—La Prière pour Tous. Lorsque l'Enfant paraît. O Souvenirs.

March 12.—Napoléon II. Retour de l'Empereur. L'Expiation.

March 19.—Il n'avait pas deux Ans. Regard jeté dans une Mansarde.

March 26.—Le Pont. Les Femmes de Paris pendant le Siège. Ayme rillot.

All the Lectures on the French Language and Literature were given in French.

#### GERMAN LANGUAGE AND LITERATURE.

A course of twenty lectures on "German Literature" was given by Miss Chara B. Conant, of Brooklyn, on Monday afternoons, on the following dates and subjects:

Jan. 8.—"The Reign of the Hohenstaufens, and the Niebelungen Lied."

Jan. 15.—"The Minnesingers."

Jan. 22.—" The Meistersingers."

Jan. 29.—" Lessing's Minna von Barnhelm."

Feb. 5 .-- "Lessing's Nathan the Wise."

Feb. 12.—"Wieland, Herder, and the Minor Poets."

Feb. 19.—"Schiller: The Robbers."

Feb. 26.—"Schiller's Wallenstein."

March 5.—"Schiller's Mary Stuart and the Maid of Orleans."

March 12.—"Schiller's William Tell."

March 19.—"Goethe's Iphegenie and Torquato Tasso."

March 26 .- "Herrmann and Dorothea."

April 2.—"Goethe's Faust."

April 9.—"Goethe's Faust." (Concluded.)

April 16.—" Jean Paul Friedrich Richter."

April 23.--"The Poets of the Early Romantic School."

April 30 .-- "Heinrich Heine."

May 7.—" Heinrich Heine."

May 14.—"The Patriotic Poets of Germany."

May 21.—"The German Philosophers."

An Institute Extension Course of Lectures, on "The Literature of Schiller," was given by Prof. Menco Stern, on Thursday evenings, beginning October 19th. The instruction was given in German, and on the following subjects:

#### PART ONE.

Lessons 1-6. "Schiller's Wilhelm Tell."

Lesson 7. "Schiller's Jujendgedichte."

Lesson 8. "Schiller's Philosophische Gedichte."

Lesson 9. "Schiller's Balladen."

Lesson 10. "Schiller's Spaziergang und das Lied von der Glocke"

#### PART TWO.

Lesson I. "Die Griechische Tragödie und die Braut von Messina."

Lessons 2-6. "Die Braut von Messina."

Lesson 7. "Schiller's Demetrius."

Lesson 8. "Schiller's Historische Schriften."

Lesson 9. "Schiller's Aesthetische Aufsatze."

Lesson 10. "Schiller's und Goethe's Briefwechsel."

#### ITALIAN LANGUAGE AND LITERATURE.

Under the auspices of the Dante section of the Department of Philology, two special Institute Extension Courses of lectures were given by Prof. Thomas Davidson, M.A., of New York, on "Dante's Inferno." The lectures were given on Saturday mornings, at the Packer Collegiate Institute, whose Board of Trustees very generously donated the use of a room for the lectures. The first course began on Saturday, December 2d, and continued for five weeks. The second course began on Saturday, January 13th, and continued ten weeks.

These courses were a continuation of the course begun in the winter of 1893 by Prof. Davidson, and afforded an excellent opportunity for the study of Dante.

#### ORIENTAL LANGUAGES AND LITERATURES.

A special course of Instruction in Biblical Hebrew was given by Prof. RICHARD J. H. GOTTHEIL, Ph.D., of Columbia College, as an introduction to the study of the Bible in the original tongue. The course of instruction comprised a study of the elements of Hebrew grammar, translations from the Book of Genesis,

and exercises in turning English into Hebrew. After having completed the course, those in attendance were able to read almost any part of the Bible, with the simple help of grammar and dictionary. The instruction was not only philological, but, as occasion offered, it served as an introduction to the literature and antiquities of the Hebrew people, in this way materially assisting those who attended the course of lectures offered by Dr. John P. Peters, on "The Psalms as Literature."

The textbooks used were Harper's "Elements of Hebrew" and Harper's "Hebrew Manual." The class met for twenty-four successive Monday evenings, beginning on November 4th. Several of those who took the course will take an advanced course in Hebrew Literature in the graduate department of Columbia College the coming year.

#### CLASSICAL SECTION.

ALBERT C. PERKINS, Ph.D.,
Prof. D. W. COLLARD, LL.D.,
Rev. Wm. B. FARRELL,
Miss Mary Cochran,
Mr. Henry E. Hard,

Vice Chairmen.

Secretary. Treasurer.

Chairman.

COMMITTEES OF THE CLASSICAL SECTION.

Greek Literature.

Prof. Edward S. Hawes. Mr. Thomas Flint. Miss E. B. Cutting.

Latin Literature.

Dr. Caskie Harrison. Mr. E. G. Warner. Mr. Henry E. Hard. Methods and Courses of Instruction.

Dr. R. Arrowsmith. Mr. G. D. Bartlett.

Miss Rose M. Bodman.

Library and Literature.

Prof. George M. Whicher. Mr. G. P. F. Hobson. Mr. Percy L. Wight.

Museum and Apparatus.

Dr. James Cruikshank. Miss C. T. Davis. Dr. Wm. T. Vlyman.

Book Reviews.

Mr. Harry F. Towle. Miss Sarah E. Scott. Mr. W. E. Mott.

The Classical Section of the Department of Philology of the Brooklyn Institute, was organized Dec. 4, 1893, with a membership of thirty-two, which has since been increased to thirty-six.

The section has held six regular meetings, at which the proceedings have been as follows:

Dec. 4.—Lecture by Prof. Robert Arrowsmith, Ph.D., of the Teachers' College, N. Y., on "Methods of Teaching Beginners in Latin."

Jan. 8.—Paper by Caskie Harrison, Ph.D., Head Master of the Brooklyn Latin School, on "The Great-Grandchildren of Belus."

Feb. 12.—Papers were read as follows: "Horace in English Literature," by Dr. Albert C. Perkins, President of the Section; "Recent Translations of Horace," by Prof. George M. Whicher, of the Packer Institute;

"Recent Commentaries on Horace," by Prof. Edward S. Hawes, of the Polytechnic Institute.

Mar. 12.—Paper on "Latin Conversation," by Dr. C. M. O'LEARY, of New York; and a Paper by Mr. H. F. Towle, of the Boys' High School, on "Latin Colloquies in Elementary Instruction."

April 16.—Paper by Prof. Robert Arrowsmith, of the Teachers' College, New York, on "The Report of the Committee of Ten"; and on the same subject by Dr. Caskie Harrison, of the Brooklyn Latin School.

May 28.—Annual Meeting. Lecture by Prof. Edward S. Hawes, of the Polytechnic Institute, on "Athens," illustrated by lantern photographs.

Jan. 10.—A lecture was delivered, under the auspices of the Classical Section, before the Department of Philology, by Mr. J. Churton Collins, Lecturer on Comparative Literature, Oxford University, England, on "Sophocles and Shakespeare."

The Annual Meeting of the Department was held on May 25th. At this meeting reports on the work of Sections of the Department were presented, officers and committees for the coming year were elected, and the work of the season of 1894-5 was outlined.

The courses of lectures in this Department, as well as in several others, have been accompanied by references for reading, and the circulation of the libraries of the city has been very greatly influenced on the subjects covered by the lecture courses.

# DEPARTMENT OF PHOTOGRAPHY.

WILLIAM H. COOPER,
Mrs. CYRIL H. BURDETT,
LEWIS E. MEEKER, M.D.,
GOULD W. HART,
MISS ANNA L. MEEKER,
PIERRE L. LE BRUN.

President.
Vice-President.
Curator.
Secretary.
Corresponding Secretary.
Treasurer.

#### Executive Committee.

WILLIAM H. COOPER.

J. FOSTER FLAGG.

LEWIS E. MEEKER, M.D.

Prof. WILLIAM C. PECKHAM.

GOULD W. HART.

Mrs. Cyril H. Burdett.

GEORGE W. WUNDRAM.

GEORGE W. STREET.

Myers R. Jones.

#### Committee on Lectures.

WILLIAM H. COOPER. GOULD W. HART.
GEORGE W. WUNDRAM. N. B. SIZER, M.D.
L. E. MEEKER, M.D. H. C. S. REYNOLDS.

## Committee on Appliances and Processes.

Prof. WILLIAM C. PECKHAM. LEWIS E. MEEKER, M.D. GUSTAVE GOETZ. A. G. TISDELL.

#### Committee on Lantern Slides.

GEORGE W. WUNDRAM.

GOULD W. HART.

GEORGE W. STREET.

LEWIS P. ATKINSON.

# Committee on Photo-Microscopy.

Dr. C. J. M. WILLICH. Dr. JOSEPH H. HUNT.
GEORGE E. ASHBY. Prof. WM. C. PECKHAM.

WALLACE G. LEVISON.

#### Committee on Excursions.

B. G. WAY. EDWARD T. COCKEY.
ISAAC E. CHAPMAN. GEORGE W. WUNDRAM.
Mrs. H. A. DECKER. HENRY C. BARROWS.

# Committee on Receptions.

HENRY A. CARLY.

MYERS R. JONES.

THEODORE K. HASTINGS.

MISS JESSIE VAN BRUNT.

H. L. UNDERHILL.

J. W. MILLARD.

J. T. MONTGOMERY.

Mrs. C. H. BURDETT.

#### Committee on Annual Exhibition.

Mrs. C. H. Burdett.

J. Foster Flagg.
Gould W. Hart.

L. E. Meeker, M.D.

William H. Cooper.
Henry J. Newton.
William E. Platt.
George W. Street.

GEORGE W. WUNDRAM.

The Department of Photography was organized on March 26th, 1889, with thirty-four members; the present membership is two hundred and forty-eight, a gain of twenty-one members during the year. The regular monthly meetings are held on the fourth Monday of each month, and during the year have been as follows:

Oct. 23.—An Exhibit of Lantern Photographs, from the collection of Mr. Frederick A. Ober, of Washington, D. C., described by Mr. J. Foster Flagg, President of the Department.

Nov. 27.—Lecture by Mr. Elijah R. Kennedy, on "London," illustrated by photographs of persons and places made familiar by eminent English authors. The illustrations were all taken by the lecturer.

Dec. 29.—Lecture by Mr. WILLIAM E. PLATT, Member of the Department, on "A Popular Account of the Columbian Exposition," illustrated by lantern photographs.

Jan. 29.—Exhibition of a choice selection of Lantern Photographs, taken by Miss E. V. CLARKSON, of New York.

Feb. 14.—Lecture by Prof. H. E. NORTHROP, M.A., of the Polytechnic Institute, on "Rambles through the Cities of Italy," illustrated by lantern photographs.

Feb. 26.—Lecture by Mr. WILLIAM G. OPPENHEIM, of New York, on "A Summer Outing in Canada," describing a trip through unfrequented byways, and illustrated by lantern photographs, from negatives taken by the lecturer.

Mar. 12.—Lecture by Mr. Otis A. Poole, of Japan, on "A Day in Yokohama," illustrated by lantern photographs.

Mar. 24.—Lecture by Mr. WILLIAM E. PLATT, Member of the Department, on "Picturesque Normandy," illustrated by lantern photographs made by the lecturer.

April 28.—Lecture by Prof. L. H. FRIEDBURG, Ph.D., on "Light and Its Relation to Photography," illustrated by experimental demonstrations and by lantern photographs.

May 31.—Annual Meeting. Lecture by Lewis E. Meeker, M.D., Curator of the Department, on "Glimpses of Southern California," illustrated by lantern photographs taken by the lecturer.

June 2.—Exhibition of Lantern Slides made by members, and shown by transmitted light during the Annual Photographic Exhibition, were exhibited on the screen.

The Department of Photography is to be congratulated upon the excellent facilities for work that have been provided, and for the valuable provisions that have been made for the instruction and enjoyment of all its members.

The Department has fitted up and furnished a suite of rooms at 201 Montague street, next door to the Brooklyn Library, for the exclusive use of its members. The suite includes a large studio room, 25x32 feet, which is provided with a good skylight, 10x14 feet, and is excellently adapted for studio photography; a dark room, provided with all the accessories necessary for the development of photographs, and an enlarging room, with good north light. The rooms contain appliances adapted to the best work in photography, and may be used from 9 A.M. until 10 P.M. each week day. Members are provided with lockers for their own apparatus, and a reading room contains the best standard works and current periodicals on photography.

The Department holds meetings of its members in its rooms, on Thursday evenings, at eight o'clock. These meetings are occupied by short papers on the technique of photography, on new methods and devices, by conferences on matters of scientific or artistic interest, and by exhibits of lantern slides, negatives, and prints. Among those who have contributed to the success of these meetings are Mr. J. Foster Flagg, C.E., Mr. George W. Wundram, Dr. Lewis E. Meeker, Mr. Gould W. Hart, Dr. Joseph H. Hunt, Mr. George W. Street, Mr. William H. Cooper, Mr. Charles H. Lyon, and Prof. William Hallock. Twenty-three

Exhibitions of Lantern Slides and five Demonstrations of Processes were held in the Studio Room during the year.

The FOURTH ANNUAL PHOTOGRAPHIC EXHIBITION Was given by the Department, in conjunction with the Brooklyn Academy of Photography and the Brooklyn Art Association, in the Art Association Galleries, from May 23d to June 1st inclusive. The following members exhibited photographic work: E. H. BEREND-SOHN, M.D., W. J. BRYANT, Mrs. C. H. BURDETT. FRANK A. BUTLER, WILLIAM H. COOPER, WALTER B. COWPERTHWAIT, Mrs. H. A. DECKER, W. T. DEMAREST, SAMUEL DOUGHERTY, J. FOSTER FLAGG, GOULD W. HART, CHARLES M. HEID, Dr. S. HENDRICKSON, MYERS R. JONES, JAMES W. KENT, F. L. LATHROP, W. G. LEVISON, Dr. LEWIS E. MEEKER, Dr. J. MERRITT, J. W. MILLARD, Prof. WILLIAM C. PECKHAM, Dr. B. T. READ, J. T. MONTGOMERY, GEORGE W. STREET, TRACY A. TISDELL, E. G. TREMAINE, H. L. UNDERHILL, Miss JESSIE VAN BRUNT, FRANK VAN DEVERG, B. G. WAY, W. T. WINTRINGHAM, and G. W. WUNDRAM.

A very excellent illustrated catalogue of the Exhibition was issued by the Department, and the public were admitted to the exhibition without charge from 9 A.M. until 10 P.M. The attendance, exclusive of members, was about thirty-six hundred.

An experienced photographer is present at the rooms of the Department each day and evening to assist members with their work, develop negatives, print positives, make lantern slides, and copy positives or negatives for members at very moderate rates.

Excursions to points of historic, scientific or picturesque interest are made on Saturdays and legal holi-

days by members, under the leadership of members of the Excursion Committee, during the pleasanter months of the year.

The Department is engaged in making a collection of photographs of Brooklyn, the collection to contain the best photographs to be obtained of (1) buildings, streets and places of historic interest, (2) buildings of architectural excellence, (3) views of the bridge, the park and the harbor, (4) monuments and statues, (5) public buildings, churches and schools, (6) views of the Navy Yard, docks and shipping, and (7) places of interest and natural beauty on Long Island. Contributions to this collection will be welcomed from all who are interested in Brooklyn and its history.

#### DEPARTMENT OF PHYSICS.

Prof. Samuel Sheldon, Ph.D., Wallace Goold Levison, Prin. James Priddy, P. H. Van Everen, President. Vice-President. Secretary. Treasurer.

## Executive Committee.

Prof. Samuel Sheldon, Ph.D. George M. Hopkins.
Prof. William C. Peckham.
Prof. Daniel W. Hering.
Prof. John S. McKay, Ph.D.

NATHANIEL FROTHINGHAM.
WALLACE GOOLD LEVISON.
JAMES PRIDDY.
P. H. VAN EVEREN.
DOUGLASS BURNETT.

The Department was organized in May, 1888, with thirty-six members. The present membership is one hundred and fifty-nine. The regular meetings are held on the fourth Tuesday of each month. The proceedings and meetings during the past year have been as follows:

Oct. 12 to Nov. 23.—In conjunction with the Department of Pedagogy, a course of four lectures was given by Prof. John F. Woodhull, of the Teachers' College, New York City, entitled "A First Course in Science for Elementary Schools." The subjects and dates are given under the Department of Pedagogy.

Nov. 1.—Lecture by Prof. Samuel Sheldon, Ph.D., President of the Department, on "Recent Theories of Salt Solutions," illustrated by experimental demonstrations.

Jan. 17.—Excellent lantern illustrations of "Photographing in Colors," by Mr. R. D. Grav, of New York, were exhibited. A description of the process of Color Photography was given by Mr. George M. Hopkins, Member of the Department.

Feb. 27.—Lecture by Prof. Daniel W. Hering, of the University of New York, on "The Peculiar Properties of Water and other Liquids," illustrated by experiments.

Mar. 27.—Lecture by Prof. John S. McKay, Ph.D., of the Packer Institute, on "The Liquefaction of Air and other Gases," illustrated by experimental demonstrations and by lantern photographs.

The means of illustrating the lectures of the Department and of the Institute have been increased by the purchase of a Clark electric arc lamp for use in the large Hawkridge lantern, and by a Beseler arc lamp for use in the Tisdell lantern. In fully nine-tenths of the illustrated lectures given during the year the electric light has been used in the lanterns in preference to the lime light. The collection of lantern slides has been

increased by the manufacture of about two hundred for the use of the scientific Departments.

#### DEPARTMENT OF POLITICAL SCIENCE.

Hon. John A. Taylor,

Prof. Charles H. Levermore, Ph.D.
CONRAD V. DYKEMAN,
C. H. J. DOUGLAS, Ph.D.,
CHARLES CLAGHORN,

President.
Vice-Presidents.

Secretary.
Treasurer.

#### Executive Committee.

Hon. John A. Taylor.

Prof. William A. Dunning.
C. H. J. Douglas, Ph.D.

J. Howard Cowperthwait.

Lewis G. Janes, M.D.

Charles B. Hewitt.

Conrad V. Dykeman.

# Committee on the School of Political Science.

Hon. John A. Taylor.
Lewis G. Janes, M.D.
Prof. C. H. J. Douglas, Ph.D.
Prof. Wm. A. Dunning, Ph.D.
Charles B. Hewitt.
Rev. J. Coleman Adams, Ph.D.
Hon. George H. Fisher.
W. Irving Comes.
Prof. Franklin W. Hooper.

Prof. Fred. W. Osborn, M.A. Charles Claghorn, M.A. J. Howard Cowperthwait. Walter A. Logan. Conrad V. Dykeman. Howard T. Walden. Mrs. Bernard Peters. Mrs. Maria H. Elwell. Mrs. Jennie A. Whitcomb.

The Department of Politicial Science was organized on December 17, 1889, with one hundred and sixteen members. The present membership is six hundred and forty-four, a gain of nineteen during the past year. The work of the Department is under the general direction of the Executive Committee. The regular meetings of the Department are held on the third Thursday of each month. The meetings and work

during the past year have comprised six courses of lectures on social, political, economic and historic questions, and four courses of instruction in the School of Political Science.

The courses of lectures have been in two series, one on Thursday evenings, the other on Saturday evenings. A list of the courses, with the dates and titles of the individual lectures, is given on the following pages.

# THURSDAY EVENING LECTURES.

A course of six lectures by Mr. William Clark, of London, on "Social Reform in England," was given as follows:

Oct. 5.—"Carlisle and Ruskin and their Influence on English Social Thought."

Oct. 12.—"Socialism in England."

Oct. 19.—"The Government of London."

Oct. 26.—"The Fabian Society and its Work."

Nov. 2.—" English Working Class Leaders."

Nov. 28 .- "The London Working Classes."

A course of six lectures on "The Character of the Constitutional Government of the United States," by Prof. Woodrow Wilson, Ph.D., of Princeton College, on the following dates and subjects:

*Nov. 16.*—"What is a Constitution, and what is a Constitutional Government?"

Nov. 23.—" Political Liberty: In what does it consist and from whence does it come?"

Dec. 7.—"The Origin, History and Significance of Our Federal Constitution."

Dec. 14.—"Theory and Practice in the Organization of Our Government."

Dec. 21.—"The Organization of Congress and its Powers."

Dec. 28.—"The Function of the Courts under a Constitutional Government."

A course of four lectures was given by Dr. Edward Eggleston, of New York, on "Early Intellectual Life in the United States," under the joint auspices of the Long Island Historical Society and the Brooklyn Institute, as follows:

Jan. 4.—"Folk Speech and Mother English in the United States."

Jan. 11.—" Education, Literature and Medicine."

Jan. 18.—" Early Law and Lawyers."

Jan. 25.—"The Colonial Girl and Woman."

A course of four lectures in "The American Statesmen Series," by Prof. John Fiske, of Cambridge, Mass., in continuation of a course given by him last year, under the joint auspices of the Long Island Historical Society and the Brooklyn Institute, as follows:

Feb. 1.—"Thomas Hutchinson."

Feb. 8.—"Charles Lee, the Soldier of Fortune."

Feb. 15.—"Tippecanoe and Tyler too."

Mar. I .-- "Daniel Webster."

A course of six lectures on "The Opening of the Great West," under the joint auspices of the Long Island Historical Society and the Institute, as follows:

Mar. 8.—Lecture by the Rev. WILLIAM ELLIOT GRIFFIS, of Ithaca, on "Spain and France in the Great West."

Mar. 15.—Lecture on "The Northwest Territory and the Ordinance of 1776," by the Hon. George F. Hoar, of Massachusetts.

Mar. 22.—Lecture by Mr. Edwin D. Mead, Editor of the New England Magazine, on "Washington's Work in Opening up the Great West."

Mar. 29.—Lecture by the Hon. Charles C. Coffin, of Boston, on "How the Great West was Settled."

April 5.—Lecture by the Rev. Thomas Van Ness, of Boston, on "Lewis and Clarke and the Exploration of the Rocky Mountains."

April 12.—Lecture by Prof. Josiah Royce, Ph.D., of Harvard University, on "California and Oregon."

The above course of lectures is nearly the same as the "Old South Course," given in Boston during the preceding summer.

# SATURDAY EVENING LECTURES.

A course of six lectures was given by Prof. James H. Hyslop, Ph.D., of Columbia College, on "Charity as Viewed from an Historic and Scientific Standpoint," under the joint auspices of the Long Island Historical Society, the Brooklyn Bureau of Charities and the Institute, as follows:

Oct. 7 .-- "The History of Charity."

Oct. 14 .-- "The Causes of Poverty."

Oct. 21.—"The Causes of Poverty."

Oct. 28 .-- "General Measures of Relief."

Nov. 3.—"Charity Organizations."

Nov. 10 .- "Recent Improved Methods of Charity."

The Annual Meeting of the Department was held on the evening of May 17th, Reports of the Executive Committee and the Committee on the School of Political Science were received; officers and committees for the season of 1894-95 were elected, and the work of the coming season was determined.

# THE SCHOOL OF POLITICAL SCIENCE.

This school was opened on the evening of October 17, 1892, and is established for the purpose of providing means of instruction for the following persons:

- r. Classes of Young Men. There are forty thousand young men residing in Brooklyn who have passed the school age and who should be prepared for the intelligent and righteous discharge of the duties of citizenship. Many of these young men have already become interested in political and social questions, and desire systematic instruction in Political, Economic and Social Science.
- 2. Classes of Young Women. There are large numbers of young women in the city who have passed the school age, and to whom the privileges of a full college and university training have not been open, who are naturally studious and who feel a deep interest in all questions which relate to the social, civil and political history of our country and to the great social problems of the day.
- 3. Large numbers of Teachers in our Public and Private Schools, whose duty it is to give instruction in civil government and United States history, who are glad to attend excellent courses of lectures and conferences conducted by able specialists engaged in giving instruction on these subjects. Such courses, it is

believed, will lead to the enlargement of the courses of instruction in History and Government in schools, whose special purpose it is to give information that will prepare our youth for citizenship.

- 4. Mechanics and Artisans who are thoughtful citizens, and who are glad to attend courses of lectures on the political and economic problems of the day. These subjects may be presented under the auspices of labor organizations.
- 5. Large numbers of our citizens who are deeply interested in everything that pertains to the uplifting of our American institutions, and whose love of country prompts them to every species of activity that will promote the public good. Already several hundred of these have attended the courses of lectures conducted by the Department of Political and Economic Science of the Institute. These people demand more thorough and systematic instruction in the future than the Institute has afforded up to the present time.

# METHODS OF INSTRUCTION IN THE SCHOOL.

- 1. Systematic Courses of Teaching in Classes, under a thoroughly capable and interesting instructor, who will use lectures, text-books, conferences, printed directions for reading and investigation, or any other legitimate and effective means of bringing his subject before his classes.
- 2. Courses of Lectures, accompanied by directions for reading and study, similar to courses that have already been given by other departments of the Institute,

- 3. Courses of Popular Lectures, calculated to interest and instruct very large numbers of our people, and also calculated to lead to the more systematic work indicated above.
- 4. Special Addresses on National Holidays and on occasions of great public interest, and calculated to foster true patriotism and the love of humanity.

#### THE COURSE OF STUDY.

#### I. Government:

- 1. Civil Government of the United States.
- 2. The History of American Politics.
- 3. The Political Institutions of Foreign Countries.

# II. Political Economy:

- 1. Elementary Course in Political Economy.
- 2. Advanced Course in Political Economy.
- 3. Practical Problems in Political Science.

# III. History;

- 1. American History.
- 2. European History.
- 3. History of Civilization.

# IV. Sociology:

- 1. The Duties of Citizenship.
- 2. The Duty of the State to Dependent Classes.
- 3. The Nature of the True Republic.

The subjects in the foregoing groups are arranged in progressive series. Number 1 in each group should be taken first. Individuals will be encouraged to select courses for which they are prepared by previous training,

Different phases of a subject like American History will be presented in successive years, so that new themes will be constantly brought before the public.

# WORK OF THE SCHOOL IN 1894-95.

Four classes were formed during the past season, three in Civil Government, under Dr. Lewis G. Janes, and one in Political Economy, under Dr. Charles H. J. Douglas. Each class held twenty-four weekly sessions, beginning the third week in October, and ending the first week in May.

Class I., in Civil Government, met in the Lecture Room of the Bryant & Stratton Business College, at 44 Court street, Mr. Charles Claghorn, Principal, on Monday evenings, and numbered twenty-six students. Class II. met in the Office of Mr. Conrad V. Dykeman, at 531 Broadway, on Wednesday evenings, and numbered thirty students. Class I. accommodated students in the western section of the city, and Class II. those in the eastern section.

The Classes in Civil Government had twenty-four topics assigned to them for discussion with the instructor, one for each session of the class. Mr. John Fiske's "Civil Government in the United States" was used as the text-book, and Mr. James Bryce's "American Commonwealth" was used as a reference book by the students.

The third course conducted by Dr. Janes was in "The History of American Politics" from the revolutionary period to the present time. In this course as in the preceding ones twenty-four topics for discussion were assigned for the twenty-four weekly sessions of

the class. Prof. ALEXANDER JOHNSTON'S "History of American Politics" was used as a text-book, and Bryce's "American Commonwealth" and Stanwood's "History of Presidential Elections" as companion handbooks. The number of students in the class was thirty.

The course in Political Economy conducted by Dr. Douglas used Dr. Francis A. Walker's "Text-book on Political Economy" as a basis for its discussions, topics being assigned in advance for each meeting of the class, which numbered sixteen students.

The number of students in attendance on all the classes was one hundred and two as against seventy the preceding year.

The tuition was \$4.00 for each course.

# DEPARTMENT OF PSYCHOLOGY.

Prof. Frederick W. Osborn,
William H. Maxwell, Ph.D.,
Almon G. Merwin, Pd.D.,
Miss Marie L. Burge,
Albert M. Curry, M.D.,

President.

Vice-Presidents.

Secretary.

Treasurer.

## Executive Committee.

Prof. Frederick W. Osborn. William H. Maxwell, Ph.D. John C. Shaw, M.D.

ALMON G. MERWIN, Pd.D.
ALBERT M. CURRY, M.D.
Miss A. E. WYCKOFF.

Miss Marie L. Burge.

Committee on Physiological and Pathological Psychology.

JOHN C. SHAW, M.D. ALBERT M. CURRY, M.D. Miss A. E. WYCKOFF. WILLIAM H. MAXWELL, Ph.D. LEWIS G. JANES, M.D. ROBERT G. ECCLES, M.D.

#### Committee on Systematic Psychology.

Prof. Brainerd Kellogg. Prof. Frederick W. Osborn. EDGAR D. SHIMER, Ph.D.

WILLIAM H. MAXWELL, Ph.D. I. SPENCER TURNER. Miss Sarah E. Scott.

#### Committee on Psychical Research.

Prof. Frederick W. Osborn. JOHN WINSLOW.

J. H. HOBART BURGE, M.D. Miss Marie L. Burge.

RODRIGUES OTTOLENGUI, M.D.S. JAMES CRUIKSHANK, LL.D.

# Committee on Educational Psychology.

Miss A. E. Wyckoff. Prof. Walter L. Hervey, Ph.D. Miss Sarah E. Scott. Prof. Frederick W. Osborn.

Prof. John Franklin Riegart.

Miss NETTA SAWVER.

The Department of Psychology was organized April 29th, 1890, with sixty-eight members. The present membership is one hundred and seventy-eight, a gain of fifteen members during the past year. The regular meetings of the Department were held on the fourth Monday of each month, and during the season were as follows:

Oct. 24.—Lecture by Prof. Borden P. Bowne, Boston University, on "The Idea of Freedom; its Philosophical Significance."

Dec. 11.—Paper by Prof. Frederick W. Obsorn, of the Adelphi Academy, President of the Department, on "The General Principles Applicable to the Teaching of Psychology in Secondary Schools."

Dec. 26.—Lecture by Prof. John Dewey, Ph.D., of Michigan University, on "The Relation of Language to Thought."

Jan. 15.—Paper by Dr. Edgar D. Shimer, on "The Laws of Association as Applied to Class-Room Work,"

Jan. 30.—Lecture by Dr. Thomas M. Balliat, Supt. of Schools, Springfield, Mass., on "The Psychology of Manual Training."

Feb. 27.—Paper by Miss A. E. WYCKOFF, of the Packer Institute, on "Attention," followed by discussion.

Two courses of lectures were provided for the members, as follows:

I. A course of five lectures on "Topics in Psychology of Interest to Teachers," by Prof. Josiah Royce, Ph.D., of Harvard University, on Saturday mornings, under the joint auspices of the Departments of Psychology and Pedagogy.

Oct. 14.—" The Psychology of Imitation from the Teacher's Point of View."

Oct. 21.—"The Psychology of Imitation from the Teacher's Point of View," concluded.

Oct. 28.—"Apperception and the Theory of the Orderly Acquisition of Ideas."

Nov. 4.—"The Psychology and the Training of Self-Consciousness."

Nov. 11.—"On a Due Regard for Varieties of Individual Temperaments."

II. A course of six lectures on "The Psychology of Sleep and Dreams," by Prof. George Trumbull Ladd, of Yale University, as follows:

Mar. 2.—" The Body and the Brain in Sleep."

Mar. 16.—"Sleeping and Waking."

Apr. 6.—" The Origin of Dreams."

Apr. 20.—"The Mind in Dream-Life."

May 4.—" The Mind in Dream-Life."

May 24.—" Artistic and Prophetic Dreams."

Seven conferences and two round-table discussions were conducted under the united auspices of the Department of Psychology and the Section of Educational Psychology of the Department of Pedagogy. An account of these conferences may be found under the Department of Pedagogy.

The Annual Meeting of the Department was held on the evening of May 24th, for the election of officers and to hear the reports from the standing committees.

# DEPARTMENT OF ZOOLOGY.

Prof. John Mickleborough, Ph.D.,
Henry C. Burton,
Miss Alice A. Douglas,
Charles A. Dayton,
Oliver D. Clark,
Arthur H. Howell,

President.
Vice-President.
Secretary.
Treasurer.
Curators.

#### Executive Committee.

Prof. J. Mickleborough, Ph.D. Miss Alice A. Douglas. Charles A. Dayton. Harry E. Burton. Oliver D. Clark. Arthur H. Howell.

The Department of Zoölogy was organized on February 12th, 1889, with twenty-two members. The present membership is one hundred and two, a gain of twenty-nine during the last season. The regular meetings, held on the second Tuesday of each month, have been, during the year, as follows:

Oct. 10.—Lecture by Prof. John Mickleborough, President of the Department, on "The Structure and Classification of Mollusks." Ten species of Pelecypods were studied, and specimens of each species were given to members for their private collections.

Nov. 14.—Lecture by Prof. John Mickleborough, President of the Department, on "The Structure and Classification of Gasteropoda." Ten species were described and specimens given to members for their private collections.

Dec. 12.—Lecture by Prof. John Mickleborough, President of the Department, on "The Brachiopoda." Several species were described and named, and specimens were presented to the members for their private collections.

Feb. 13.—Examination of the Collections of the Department at the Bedford Park Museum. A description of the "Corals" was given, by Miss Mary B. Dennis, Ph.D.; and of the "Pelecypoda," by Prof. John Mickleborough.

Mar. 13.—Illustrated paper by Mr. Arthur H. Howell, Secretary of the Linnean Society, on "Birds in our Large Cities."

May 8.—Annual Meeting. Lecture by Prof. Herbert W. Conn, Ph.D., Director of the Biological Laboratory of the Institute at Cold Spring Harbor, on "The Theory of Evolution as Applied to Animal Life," illustrated by Lantern Photographs.

May 30.—Excursion to Oyster Bay and vicinity.

A special course of six lectures before the Department and the Brooklyn Teachers' Association was given by Prof. John Mickleborough, President of the Department, at the Bedford Park Museum, on Thursday afternoons, beginning April 12th, with an average attendance of thirty. Two of the lectures given were on "Mollusks," and one each on "Radiates," "Insects," "Birds," and "Mammals."

#### SECTION ON ORNITHOLOGY.

A Section on Ornithology was organized on March 20, with a membership of thirty-two. The officers and proceedings of the Section were as follows:

HENRY C. BURTON, EDWARD F. CARSON, ARTHUR H. HOWELL, EDWARD A. BEHR, Chairman.
Secretary.
Curator.
Librarian.

#### Committee on Papers.

Arthur H. Howell. Frank E. Johnson. E. F. Carson.

#### Committee on Local Fauna.

F. E, JOHNSON. HARRY C. OBERHOLSER.
O. A. DOERFLINGER. ARTHUR H. HOWELL.

E. F. CARSON.

The regular meetings of the Section have been held on the first and third Thursdays in each month, and have been during the year as follows:

March 20.—Meeting for organization.

April 5.—Paper read by Dr. Wm. C. Braislin, on "Birds Observed in Prospect Park During the Winter of 1893-94."

April 19.—Lecture by Mr. A. H. Howell, on "Spring Migration in the Vicinity of Brooklyn, from 1890 to '92."

May 3.—Paper by Mr. HARRY C. OBERHOLSER, on the "Red Shouldered-Hawk in Captivity."

May 17.—Paper by Mr. Frank E. Johnson, entitled "Some Notes on the Collection and Preservation of Birds."

June 7.—" Report of the Committee on Local Fauna," and a paper by Mr. A. H. Howell, on "A Trip to Oyster Bay and Vicinity."

June 21.—Discussion on "The Best Methods of Field Work and of Recording Observations."

In addition to the above meetings a Field Meeting was held on May 30 (Decoration Day), at Oyster Bay, when excellent field work was done by the members.

The collections of the Ornithological Section consist of the Henry F. Aten and the George B. Brainerd Collections, and that of Mr. A. H. Howell. The Henry F. Aten Collection contains 470 mounted birds, chiefly Ducks, Shorebirds, Herons and Grouse, and 400 bird skins, all well made and in excellent condition. The George B. Brainerd Collection contains 285 bird skins, with data. These above collections have, during the summer of 1894, been thoroughly overhauled, catalogued and labeled by the Curator.

There are also deposited in the rooms of the Institute, as a loan collection, accessible to Members for study, 700 bird skins, from Mr. Arthur H. Howell, collected chiefly from Long Island, and fairly representative of the land birds of this vicinity.

The Library of the Ornithological Section at present numbers twenty-seven books and pamphlets and two maps. Among the books is one deserving special notice. It is Part I. of Capt. Bendire's "Life Histories of North American Birds," of which there are but few copies still to be obtained. The library was very fortunate in securing one. The two maps are from the U. S. Coast Survey, of Long Island and adjoining territory.

The number of ornithological works is very encouraging, considering the few months the library has been in existence, and that no money has been expended in purchasing books.

The thanks of the Section for the donations of books are due to Prof. John Mickleborough, Messrs. L. S. Foster, Henry C. Burton, A. J. Cook, and to the Smithsonian Institution and the U. S. Department of Agriculture.

The collections of the Department have been increased during the year by the Claudius B. Nichols Conchological Collection, the late Dr. Aten's collection of Birds, collections of Corals and Skeletons of Vertebrates, from Prof. Franklin W. Hooper; a collection of Fishes, from Mr. Eugene G. Blackford, and two loaned collections—one of Mounted Birds, from Dr. Southwick, and one of Birds' Skins, from Mr. Arthur H. Howell, Curator of the Ornithological Section.

The collections have been placed in the Museum Building, Bedford Park, and have been arranged with considerable labor by the officers of the Department for public exhibition, and may now be inspected on Saturday afternoons, from one to five o'clock.

The Department has been one of the active agencies in the organization and maintenance of the Biological Laboratory at Cold Spring Harbor, whose work is described on succeeding pages. With the erection of the Museum Buildings, this Department, like most of the others, will find its work greatly increased.

# TABLE SHOWING THE MEMBERSHIP OF DEPARTMENTS.

Department.	1892-93.	1893-94.	Gain During the Year	Order of Size
Archæology	120	129	9	18
Architecture	282	266	Loss —16	6
Astronomy	140	156	16	13
Botany	186	244	58	8
Chemistry	144	150	6	14
Domestic Science		42	42	24
Electricity	232	237	5	9
Engineering	140	140	0	17
Entomology	38	39	I	25
Fine Arts	447	477	30	4
Geography	157	172	15	II
Geology	158	159	I	12
Law		87	87	22
Mathematics	49	51	2	23
Microscopy	136	143	7	15
Mineralogy	120	126	6	19
Music	264	485	221	3
Painting	89	94	5	21
Pedagogy	343	414	71	5
Philology	682	879	197	I
Photography	227	248	21	7
Physics	157	159	2	16
Political Science	625	644	19	2
Psychology	163	178	15	10
Zoology	73	102	29	20
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# THE INSTITUTE LIBRARY.

The general library of the Institute comprises about 14,000 volumes, and is the oldest public library in the city. Formed originally in large part of gifts by public spirited citizens of the old Brooklyn village, it contains much that is valuable in the way of local history, and many volumes valuable for their age and rarity. It is specially rich in first American editions, and possesses unusually full collections of travels and explorations, and of old French and English plays. The character of the collection is, however, general, and the whole field of literature, in its broad sense, is represented with tolerable impartiality.

The general library is free to any responsible resident of Brooklyn, and the books are loaned for home use. The libraries of the Departments, some of which possess valuable special collections, are for consultation only, and are open only to members of the Institute.

The Institute received on the first day of June, 1894, through the generosity of a number of its members, the library of the late Rev. Frederick A. Farley, D.D., for many years a member of the Institute, and the pastor, personal friend, and advisor of Augustus Graham, the Founder of the Institute, from the time of the removal of the Institute from its first building at the corner of Henry and Cranberry Streets to Washington Street until the Founder's death. The clause in the will of Augustus Graham providing for the Sunday Evening Lectures on "The Power, Wisdom, and Goodness of God as Manifested in His Works," was

written by Dr. Farley after Mr. Graham had made known to him, in a general way, his wishes with regard to the endowment of the Institute. It is most appropriate, therefore, that the friends of the late Dr. Farley should have purchased the entire library and the cases containing it, and have presented them to the Institute. The library contains sixteen hundred volumes on History and Literature, all of them choice and valuable works, and many of them rare and exceptional in value. The conditions on which the library is presented and received are that it shall be kept together for use as a library of reference, and be placed in the Museum Building, when erected, in an alcove by itself, and be designated as the Frederick A. Farley Library

From other members of the Institute about three hundred volumes have been received during the year for the use of the several Departments. The Library now contains fourteen thousand volumes and twenty-two hundred pamphlets. Four thousand volumes are now at the Bedford Park Building, and the remainder of the library is in storage awaiting the erection of the Institute building.

It is but natural that the development of the library of the Institute should be in connection with the general educational work which the Institute is doing through its various Departments. Several large and valuable libraries have grown up in the city since the foundation of the Institute Library, each serving its own special function. It would be superfluous, therefore, for the Institute to develop its library on the plan of any of these. But a library administered in close

relation with the liberally extended educational work of the Institute has a very special and unique opportunity for usefulness, such as is not possessed by the usual forms of public libraries. More and more it is being recognized that public libraries are great engines powerful for vast injury, or infinite benefit, according to the books they contain and the use that is made of them. To interest the public in great and important subjects is the high function of the Institute; to supply, while the appetite is keen, the food which will develop interest into knowledge and productiveness is the great work of the Institute Library.

Members and citizens generally are cordially invited to donate to the library either books or pamphlets that will be of value to the Departments.

# THE BIOLOGICAL LABORATORY.

[Located at Cold Spring Harbor, L. I.]

#### BOARD OF MANAGERS.

EUGENE G. BLACKFORD, Prof. Franklin W. Hooper. President. Secretary.

EUGENE G. BLACKFORD.
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JOHN D. JONES.
CORNELIUS N. HOAGLAND, M.D.
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Prof. J. Mickleborough, Ph.D.
Rev. George D. Hulst, Ph.D.

#### Executive Committee.

EUGENE G. BLACKFORD. CHARLES L. WOODBRIDGE. H. MESSENGER AYRES. Gen. John B. Woodward, Prof. F. W. Hooper, Prof. J. Mickleborough, Ph D.

# BOARD OF INSTRUCTION.

Prof. Herbert W. Conn, Ph.D., (Wesleyan University), Director. Prof. Lorenzo N. Johnson, (Michigan Univ.), Director in Botany. Prin. Mary B. Dennis, Ph.D., (Brooklyn), Elementary Zoölogy. Prof. W. H. C. Pynchon, (Trinity College), General Biology.

## LOCATION OF THE LABORATORY.

The location of the Biological Laboratory, at the head of Cold Spring Harbor, is one of the most favorable on the coast. The country around is high and rolling, with abundant forests, glens and small streams, affording most excellent collecting ground for every form of animal and vegetable life common to our climate. Just above the Laboratory is a series of three beautiful fresh water ponds, each fertile in forms of fresh water life, and through which flows the water of Cold Spring Creek. Just below the Laboratory is the long and beautiful harbor of Cold Spring, divided by a sandy neck into an inner and an outer basin. The inner basin is particularly rich in marine life, and the channel between the inner and outer basins has a most varied and vigorous growth of algae, molluscs and echino-The outer basin has rocky projections, shallow flats, banks, and eel grass, sheltered pools, oyster beds, and other most favorable conditions for collection and study. The outer basin opens widely into Long Island Sound, whose shore is very varied in character for twenty miles in either direction.

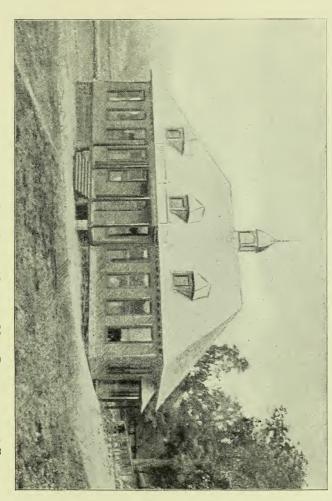
# LABORATORY AND APPLIANCES.

The facilities for Biological Work at the Summer Biological Laboratory of the Institute were materially increased last season by the erection of a new and commodious laboratory building (36x72 feet) designed for the special purposes of the school. The laboratory building stands upon a wharf close by the water, and is provided with all the necessary conveniences for

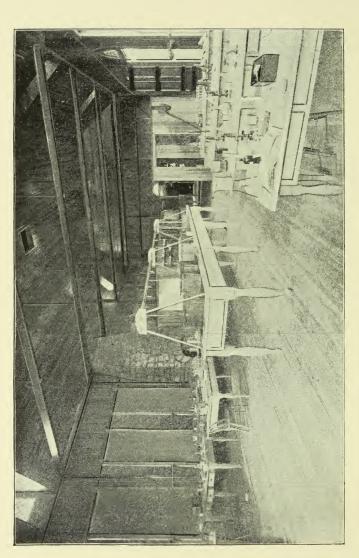
summer work. It contains (1) a general laboratory (36x40 feet), in which are located tables for students' work, aquaria supplied with running fresh and salt water, and conveniences for lectures and class instruction; (2) six private laboratories, which were assigned to persons who were competent to carry on independent work, and who were, as a rule, engaged in special investigation; (3) a room equipped for and devoted to work in bacteriological technique, such as making cultures, isolating species of bacteria, etc.; (4) a room equipped with apparatus for photographing purposes, including ordinary photography, microscopic photography and the making of lantern slides, and (5) a working library placed at the disposal of the members of the School. In addition the students were furnished with all the necessary apparatus, reagents, etc., for biological work at the seashore. The Laboratory owns a launch provided with apparatus for the collection of material for laboratory work, and small row boats were at the disposal of the school. Near by the main laboratory is a second building equipped and used for lecture purposes in cases where larger numbers attend the lectures than the general laboratory room will accommodate, or in cases when it is desirable to use the lantern for illustrative purposes. Through the generous hospitality of the New York State Fish Commission portions of the Fish Commission Building were placed at the disposal of the School.

# THE PURPOSES OF THE LABORATORY.

The objects of the Laboratory are (1) to furnish a place for general biological instruction and (2) to offer



THE BIOLOGICAL LABORATORY, COLD SPRING HARBOR .- MAIN BUILDING, 72 x 36 FEET.



INTERIOR VIEW OF MAIN LABORATORY BUILDING.
Showing Laboratory Tables and Aquaria.

opportunity for investigation to advanced students. The first object to which the energies of the school are devoted is to develop a first-class school of biological instruction for students who feel the need of practical study at the seashore and of assistance in their work. For this reason the school at Cold Spring Harbor is especially adapted, first, to college students who have not had extended laboratory work in Biology, or who, having had biological work, desire to supplement this work with the practical study of marine forms in their native condition, and desire to do this under the guidance of instructors; second, to teachers or other students who are desirous of obtaining a practical familiarity with Botany or Zoölogy, to assist them in the work of instruction, or in gaining a practical knowledge of general Biology; third, to medical students whose medical course is so crowded as to make it impossible to include in it any thorough study of biological principles and truths outside of those having direct application to medicine. To such students a general course in Biology proves very valuable, and the work in Bacteriology is of especial advantage; and finally, the school offers facilities for investigation by furnishing private rooms and collecting apparatus to any who are desirous of carrying on research.

# THE COURSES OF INSTRUCTION.

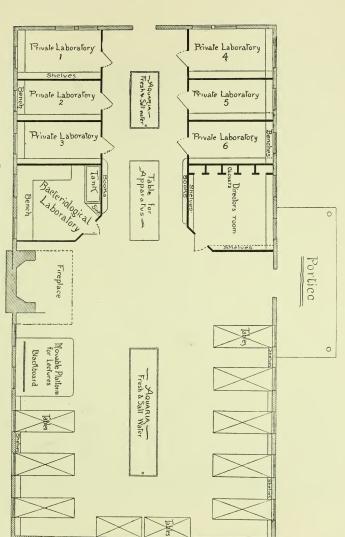
I. A Course in Comparative Embryology, consisting of laboratory work and lectures. The laboratory work included the embryology of Hydroids, Echinoderms, Annelids, Mollusca, Crustacea, and the lower Vertebrates. The lectures comprised a general survey of

Comparative Embryology, and a particular description of the development of the forms studied in the laboratory. Specialists and advanced students taking this course were encouraged in original research.

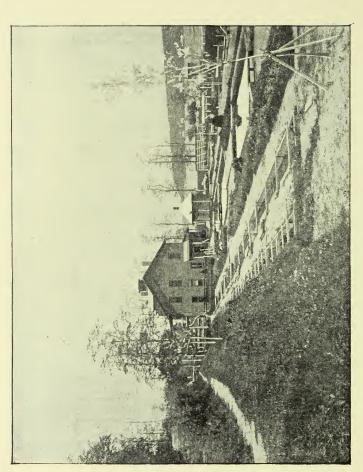
II. A Course in Bacteriology. Physicians, medical students, and others who are qualified for practical work in bacteriological methods were admitted to this course. It included instruction in the methods of making culture fluids, separating species of bacteria, determining specific characteristics of bacteria, staining and microscopic study of the organisms, and of other technical work of a similar character. The amount of work done was sufficient to enable the student to continue bacteriological work by himself. Accompanying the practical work was given a course of lectures upon the history of bacteriology, which traced our knowledge of the subject from the earliest date to the present time.

III. Advanced Course in Botany, consisting of microscopic work on the structure and development of Cryptogams, and a course of lectures on general Cryptogamic Botany. Students taking this course were encouraged in original research, and several specialized their laboratory work upon a single group of plants.

IV. Course in Elementary Zoölogy. This course was specially adapted for teachers of Zoölogy in schools and academies. The instruction included laboratory work upon typical forms like the hydroid, jelly-fish, coral star-fish, sea-urchin, clam, snail, shrimp, cray-fish, crab, butterfly, beetle, frog, etc., and a course of lectures, accompanying the laboratory work, upon systematic and theoretical Zoölogy.



GROUND PLAN OF MAIN LABORATORY BUILDING.



THE FISH COMMISSION BUILDING, WITH OUTDOOR AQUARIA IN FOREGROUND. Located near the Biological Laboratory, and used in part by the Students.

V. Course in Elementary Botany, specially designed for teachers of Botany in schools and academies, and also for those who had no previous training in laboratory work on flowering plants. Those taking this course were instructed on the general structure, growth and morphology of flowering plants and in the analysis of flowers. As in the other courses, lectures and demonstrations accompanied the laboratory work.

In addition to the regular courses mentioned above was a series of fifteen illustrated lectures given in the evening upon popular scientific subjects, open to all connected with the Laboratory. A limited number of Specialists in Biology who desired to engage in original research were admitted to the privileges of the laboratory and assigned to private laboratory rooms. The fee for specialists who occupy private laboratories is \$25 per month or \$50 for the season.

#### FACILITIES FOR ADVANCED WORK.

Students who pursued the General Course of Instruction during the summer, and who had time for extra work, were given the instruction and facilities necessary to enable them to carry on special investigations, while those students who had already gained the knowledge and experience which was provided by the general course, were permitted to give their entire time to special work. No special courses were laid down in advance, but each student was at liberty to arrange with the Director of the Laboratory for such work as was practicable.

#### FACILITIES FOR ORIGINAL INVESTIGATION.

Each lecturer was provided with a private laboratory room in which to carry on his own private investigation so long as he remained at the laboratory, and was not called upon to give any instruction outside of his lectures and such directions for work as accompanied his lectures.

#### PERSONS ENGAGED IN ORIGINAL RESEARCH.

Prof. Herbert W. Conn, Ph.D., Wesleyan University, Conn.

Prof. L. N. Johnson, Michigan University.

Miss Mary B. Dennis, Ph.D., Brooklyn.

Prof. W. H. C. Pynchon, Trinity College, Conn.

Mr. Duncan S. Johnson, Wesleyan University.

Dr. Edward L. Rice, University of Munich.

#### STUDENTS IN THE SEVERAL COURSES.

#### I.—COMPARATIVE EMBRYOLOGY.

Prof. H. E. Chapin, Ohio University. Athens, Ohio. Harvey J. Clements, Teacher, Washington, Ind. W. M. Esten, Assistant, Wesleyan University, Middletown, Ct. F. T. Kurt, Student, Wesleyan University, Middletown, Ct. James F. Jones, Instructor, Marietta College, Marietta, Ohio. W. H. C. Pynchon, Instructor, Trinity College, Hartford, Ct. Annette B. Richmond, Student,

Wesleyan University, Norwich, Ct. 54 Prospect St. SARAH B. TUCKER, Student, Wesleyan University, Durham, Ct. A. M. THOMPSON, Student, Wesleyan University, Rumford, Me.

#### II.—CRYPTOGAMIC BOTANY.

HARVEY J. CLEMENTS, Teacher, Washington, Ind. F. T. Kurt, Student, Wesleyan University, Middletown, Ct. E. M. Montfort, Instructor, Marietta College, Marietta, Ohio. Annette B. Richmond, Student,

Wesleyan University, Norwich, Ct. Sarah B. Tucker, Student, Wesleyan University, Durham, Ct. A. M. Thompson, Student, Wesleyan University, Rumford, Me.

#### III-ELEMENTARY ZOOLOGY.

W. Ryall Burtis, Student, Rutgers College, Freehold, N. J. Anna E. Collins, Teacher,

Girls' Normal School, Philadelphia, Pa.

CLARA E. COOKE, Medical Student, Madisonville, Ohio.

EMMA DEANE, Teacher, 405 Sackett St., Brooklyn, N. Y.
C. S. GRISWOLD, Teacher, Groton School, Groton, Mass.

Mrs. E. HOYT, Teacher, 53 Brooklyn Avenue, Brooklyn, N. Y.

EDITH JOHNSON, Teacher, 1139 Dean St., Brooklyn, N. Y.

MILDRED JOHNSON, Teacher, 1139 Dean St., Brooklyn, N. Y.

Marietta College, Marietta, Ohio.

#### IV.—BACTERIOLOGY.

Prof. H. E. Chapin, Ohio University, Athens, Ohio. Clara E. Cooke, Medical Student, Madisonville, Ohio. J. F. Jones, Instructor, Prof. J. W. Hoffman, Tuskeegee Institute, Tuskeegee, Ala.

Evening lectures were given once a week on subjects of a general biological or scientific nature for the benefit of the students and the residents of Cold Spring and vicinity. The lectures were illustrated in most instances by lantern slides, and were attended by from fifty to one hundred and thirty people. The evening lecturers during the summer of 1893 were: Prof. Franklin W. Hooper, Prof. Herbert W. Conn,

Ph.D., Prof. L. N. Johnson, Prof. W. H. C. Pynchon, Mr. Cornelius Van Brunt, and Prof. William North Rice The number of persons in regular attendance on the lectures in addition to the students was sixty.

## TUITION, BOARDING AND ROOMS.

The tuition fee for the full term (eight weeks) was \$24.00; for the first five weeks of the season or less, \$15.00. The fee for the use of private laboratory rooms was \$50.00.

A dining room has been fitted up for the accommodation of the instructors and students in a building near by the Laboratory. Excellent table board was furnished to all connected with the School at \$4.50 per week. Furnished rooms were obtained near the Laboratory at rates varying from \$1.50 to \$3.00 a week, according to location, size, etc. Where two occupy the same room the expense of board and room was from \$6.00 to \$7.00 per week.

The buildings and grounds occupied by the Laboratory are the property of the Wawepex Society of Cold Spring Harbor, a Society founded by Mr. John D. Jones, of New York; and whose purpose it is to promote the increase and diffusion of knowledge in the Natural History Sciences. Through the great liberality of the founder of the Society, the generous action of the Society itself, and the active co-operation and support of its members, the Laboratory buildings and grounds afford most advantageous conditions for biological study and research.

# THE SHINNECOCK HILLS SUMMER SCHOOL OF ART.

This school is located at Southampton, Long Island, and is established for the purpose of affording facilities to students and artists for study and work at the seashore during the summer months, at reasonable rates. The school is under the direction of Mr. William M. Chase, President of the Society of American Artists and Instructor in the Art Students' League of New York and in the Brooklyn Art School. Mr. Chase gives two days of each week to instruction and criticism, and the students work according to his directions on other days. A Preparatory Class has been established for the benefit of the less advanced pupils, and has been placed in the charge of Miss Gilchrist, of the Art Students' League.

The school is open from June 1st to October 1st. The whole number of pupils registered during the season was one hundred and twelve, and the average number present was eighty. The tuition for the Advanced Classes in Portrait Painting, Figure Painting and Landscape Painting is \$15.00 per month, and for the Preparatory Classes \$8.00 per month.

Students may secure good accommodations for board and rooms at the Shinnecock Inn and at the neighboring farm houses at from six to eight dollars per week, and cottages for clubs of students and for families may be rented for the season at reasonable rates.

Further information concerning the school may be obtained by applying to Miss Kate Cotheal Budd, Secretary of the School, 167 West Fifty-seventh Street, New York City.

#### THE CATSKILL SUMMER SCHOOL OF ART.

This school was located during its third summer, 1894, at Evelyn College, near Princeton, New Jersey. Like its companion school, it is organized to provide the very best instruction at moderate rates during the summer months, and in this case in a hilly and mountainous country, where there are abundant facilities for landscape, cattle and figure painting. The school was under the direction of Mr. Theodore Robinson, of New York. The instruction to advanced students and artists was given by Mr. Robinson, and the preparatory Classes were directed in their work by Miss Harriet S. Peck, of the Brooklyn Art School and Secretary of the Summer School.

The headquarters of the school were at the Evelyn College, in which the main studio was located. Excellent accommodations were found in the Dormitory of Evelyn College and at the neighboring houses of the village. The cost of living was from five to seven dollars per week.

The school was opened on July 6th, and the number of pupils was fifty-two. The tuition was \$15.00 per month for advanced work, and \$8.00 for preparatory work.

For further information concerning the school inquire of Miss Harriet S. Peck, Brooklyn Art School, 248 Fulton Street, Brooklyn.

#### THE LYME SUMMER SCHOOL OF ART.

This school was located at Lyme, Conn., near the Sound and the Connecticut River, with every facility for the study of Figure, Cattle and Landscape Sub-

jects, and was under the direction of Mr. Joseph H. Boston, of the Brooklyn Art School.

The tuition for the Advanced Classes was \$15.00 per month, and for the Preparatory Classes \$8.00 per month.

Further information may be obtained concerning the school by addressing Mr. Joseph H. Boston, 203 Montague Street, Brooklyn.

#### INSTITUTE EXTENSION LECTURES.

The Institute conducted several courses of lectures and conferences during the past season on the so-called "University Extension" plan. Arrangements for courses in History, Political Science, Philosophy, and Psychology; in Architecture, Sculpture, Painting, Music, and Literature; and in Astronomy, Geology, Archæology, Geography, Botany, and other kindred subjects were made with the Institute.

The Institute Extension Lectures are accompanied by conferences either preceding or following each lecture, by very full directions for reading and study, and by examinations and certificates, at the option of those who take the lectures.

The courses conducted during the year, and for which a special fee was charged, were as follows:

1. Fourteen lectures by SMITH ELY JELLIFFE, M.D., on "Cryptogams" and "Phænogams," accompanied by eleven Field Meetings, at points of botanical interest, in close proximity to Brooklyn. The course was attended by eighty persons.

- 2. Eight lectures by Prof. WILLIAM H. GOODYEAR, M.A., of the Institute, on "The Origin and History of Classic Greek and Roman Civilization from the Standpoint of the Monuments."
- 3. Forty-two lessons by Mr. John W. McKecknie, of the Metropolitan Museum of Art, on Architectural Drawing and Perspective.
- 4. Forty-two lessons by Mr. John W. McKecknie, of the Metropolitan Museum of Art, on Shades and Shadows.
- 5. Forty-two lessons by Mr. Joseph H. Boston, of the Brooklyn Art School, on "Free-hand Drawing from Architectural Models and from the Antique."
- 6. Thirty lessons by Mr. Joseph H. Boston in Drawing from Life.
- 7. Fifteen lectures by Prof. Thomas Davidson, M.A., of New York, on "Dante's Inferno," given in the Packer Institute Building.
- 8. Ten lectures by Prof. Henri Michaud, of the Brooklyn Heights Seminary, on "Molière et Racine."
- 6. Ten lectures by Miss Louise Both-Hendriksen, on "Alfred de Musset, Lamartine, and Victor Hugo."
- 10. Twenty lectures on "Schiller," by Prof. Menco Stern, of New York.
- 11. Twenty-four lessons in Biblical Hebrew, by Prof. RICHARD J. H. GOTTHEIL, Ph.D., of Columbia College.
- 12. Ten lectures on Law for Women, by Mrs. Cor-NELIA K. Hood, LL.B., of Brooklyn, held in the Art Building, 174 Montague street.
- 13. Twelve lectures by Mr. Percival Chubb, on "Emerson and the Revival of Thought and Culture in America."

- 14. Sixteen lectures on "Shakespeare," by Mrs. Abby Sage Richardson, of New York.
- 15. Twelve lessons by Miss Eleanor E. E. Prétat, of New York, on "Physical Culture."
- 16. Six lectures by Prof. John Mickleborough, Ph.D., on "Zoölogy," given in the Bedford Park Museum Building.
- 17. Twenty-four lessons by Dr. Lewis G. Janes, on "The Civil Government of the United States."
- 18. Twenty-four lessons by Dr. Lewis G. Janes, on "The History of American Politics," given in the eastern section of the city.
- 19. Twenty-four lessons by Dr. Lewis G. Janes, on "The History of American Politics," given in the western section of the city.
- 20. Twelve lessons by Dr. C. H. J. Douglas, on "Political Economy."

The cost of the courses varied according to the number of lectures or exercises. For members of the Institute the expenses amounted to about twenty-five cents per lecture; for persons not members of the Institute the charge was generally fifty per cent higher.

In addition to the courses given heretofore will be another season courses in New Testament Greek, in Greek Poetry, in Latin Literature, in the Latin Language, in the Political Institutions of European Countries, in American History, in Chemistry, in Physics, in Electricity, in Vegetable Anatomy and Histology.

## THE MUSEUM MOVEMENT.

In December, 1888, a committee of members of the Institute was appointed by the Council to organize a movement which it was hoped might lead to the formation of Museums of Art and Science in Brooklyn. This action of the Council was indorsed by the Board of Directors early in January. The Committee determined, after some deliberation, to call a public meeting of citizens, and to that end drew up a letter of invitation to a meeting to be held on February 5, 1889. This letter, signed by about two hundred residents of Brooklyn, was sent to fifteen hundred citizens who were known to be specially interested in Art or Science

At the Citizens' Meeting, held on February 5th, pursuant to the above call, Gen. John B. Woodward, who acted as chairman of the meeting, stated its purpose, and spoke of the desire felt by the Directors of the Institute that the property of the Institute should be made more valuable to Brooklyn, and a nucleus of a much larger property to be used in the erection of Museums of Art and of Science for the education and enjoyment of the people. In closing his address, as President of the Institute, Gen. Woodward invited the co-operation of the citizens present in the movement in which the Institute has taken the initiative.

The Rev. Dr. A. J. F. Behrends spoke of the rapid growth of the city, the fact that the city was no longer looked upon simply as a suburb of New York, that it was gaining the power of self-consciousness, and was

developing commercial interests and educational institutions of its own, second to no others of their class in the country. He also spoke of the great need of a Museum of Art in the city, of the means by which it might be secured, his confidence in the value of the movement inaugurated by the Institute, and closed his address with a motion that the meeting accept the invitation of the Institute, and promise active support of the movement for a Museum.

The Rev. Charles R. Baker seconded this motion, and spoke of the educating and uplifting influence of true Art, its great value to the rich as well as to the poor, and of the importance of securing among the earliest acquisitions a collection of casts of ancient, classic and mediæval sculptures, that not only would indicate what was true in Art, but also would teach the history of its development.

The motion made and seconded was supported by the Rev. Dr. Charles H. Hall, who spoke of the early history of the Brooklyn Institute, and of the sterling sense and sagacity of its founder, Mr. Augustus Graham; of the great need of institutions in Brooklyn that will be valuable to the scholar and the student, of the dearth of Public Art in the city, of the democratic character of the movement for a public museum, and of his confidence in a popular support of the undertaking, and its ultimate success.

At the close of Dr. Hall's address, the motion made by Dr. Behrends was put and unanimously adopted. The Hon. Joshua M. Van Cott then moved that a committee of twenty-five citizens be appointed to act in conjunction with the Directors of the

Brooklyn Institute in organizing an Association which should labor to secure a Museum of Art for Brooklyn. The motion having been seconded and adopted, the following persons were appointed on the Committee:

Rev. Dr. Charles H. Hall, Rev. Dr. Richard S. Storrs, Hon. Seth Low, Rev. Dr. A. J. F. Behrends, Hon. Stewart L. Woodford, Alexander E. Orr, Rev. Dr. L. T. Chamberlain, David H. Houghtaling, Hon. Darwin R. James, Charles Pratt, Henry Hentz, John T. Martin, Joseph H. Knapp, John Gibb, Joshua M. Van Cott, Rev. Charles R. Baker, Wm. Hamilton Gibson, Rev. John W. Chadwick, A. Augustus Healy, Hon. Frederick A. Schroeder, Carll H. De Silver, William H. Male, Col. Henry T. Chapman, William Berri, John P. Adams and Frank Squier. To this committee were afterwards added the following ladies: Mrs. F. H. Wing, Miss Matilda McLean, Mrs. J. S. T. Stranahan, Mrs. S. B. Duryea, Mrs. Alfred C. Barnes, Mrs. S. V. White, Mrs. Harriet Judson, Miss Susan M. Barstow, Miss Christina Rounds, Mrs. S. H. Anderson, Miss Caroline B. Le Row and Mrs. F. W. Rockwell.

The meeting was also addressed by the Hon. David A. Boody and the Rev. John W. Chadwick. Mr. Boody spoke of the advantages that would accrue to the schools of the city from the presence of Museums of Art and of Science in our midst; of the greater value of the city as a place of residence, when such museums should be easily accessible; of the increase in the value of real estate that must follow the acquisition of large public institutions of the character contemplated, and of the public commendation and sup-

port which the movement would command as soon as it should take definite shape.

The Rev. Mr. Chadwick said that a great public museum for the people, in its high aims of educating and refining, should not lose sight of the element of enjoyment; that people whose day's labor was long and severe should find in a museum that which would give them rest and pleasure.

The Citizens' Committee as above constituted was instructed to take such steps as should be deemed wise to secure a site for an Art Museum, and to invite the co-operation of other associations in the city that were specially interested in Art and Science.

At the first joint meeting of the Committee and the Directors, held on February 21st, Dr. Charles H. Hall was elected Chairman, and Prof. F. W. HOOPER, Secretary. Dr. A. J. F. Behrends related the history of the early beginnings of the American Museum in New York, and thought the history contained valuable suggestions for the Joint Committee. By request Prof. Franklin W. Hooper gave an account of the origin and history of the Metropolitan Museum in Central Mr. Charles Pratt said that the Museum should be one that would be valuable not only to Brooklyn, but would attract people from the other side of the river and from a distance. He believed that private beneficence should contribute largely to the undertaking. Mr. William Berri said that he had some time ago sketched a plan for a movement similar to the one now undertaken, and thought the time was ripe for action. He thought that the history of similar undertakings in other cities should throw a good deal of light on the course to be pursued by the Committee. Mr. Joshua M. Van Cott thought that the first thing to be secured was a site, and moved the appointment of a Committee on Site and Legislation. The motion prevailed, and the Committee appointed consisted of Mr. Van Cott Gen. John B. Woodward, Gen. Stewart L. Woodford, Hon. David A. Boody, Mr. John P. Adams and Mr. William Potts. The Chairman was also authorized to appoint a Committee on Organization and a Committee on Invitation, the last Committee to invite the co-operation of associations interested in Art. Mr. John P. Adams spoke of the practicability and value of the movement, and Rev. Dr. L. T. Chamberlain of the importance of inviting the co-operation of other organizations as early as practicable.

The second meeting was called for March 7th, to hear a report from the Committee on Site and Legislation. The substance of the report was incorporated in the form of a bill to be introduced in the Legislature of the State, and was presented by Mr. Van Cott. After some discussion of the report it was, on motion of Gen. John B. Woodward, unanimously adopted. The bill as drawn by the Committee was introduced in the State Senate by Senator Eugene F. O'Connor on March 11, was passed by both houses of the Legislature without opposition, and was signed by the Governor early in June, when it became law.

The bill, as passed, is entitled "An act to reserve certain parts of Prospect Park, in the City of Brooklyn, from sale, and to authorize leases thereof for Art and Science Museums and Libraries." The act constitutes Chapter 372 of the laws of 1889, and is as follows:

"The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. So much of Chapter 373 of the Laws of 1870, of Chapter 795 of the Laws of 1873, and of Chapter 583 of the Laws of 1888, as authorizes or requires the Park Commissioners of the City of Brooklyn to sell any part of the lands in Prospect Park bounded northerly by land reserved for the Prospect Hill Reservoir and the Eastern Parkway, easterly by Washington avenue, southerly by the town of Flatbush, and westerly by Flatbush avenue, is hereby repealed.

Section 2. The Mayor and Park Commissioners of the City of Brooklyn are hereby authorized to designate and set apart such parts of the land mentioned in the First Section of this act as are not required for the maintenance and enlargement of said Reservoir, and as they may deem proper, for building sites for Museums of Art and Science and Libraries, and may lease such sites, at a nominal rent and for terms not to exceed one hundred years, to any Corporation or Corporations now existing, or that may hereafter be created, for educational purposes, on such conditions as may be expressed in such leases; Provided, nevertheless, that no buildings shall be erected by the Lessees upon such sites until suitable plans and specifications therefor shall have been submitted to and approved by the said Mayor and Commissioners; and also *Provided*, that such Museums and Libraries shall at all reasonable times be free, open and accessible to the public and private schools of the said city, and open and accessible to the general public on such terms of admission as the said Mayor and Commissioners shall approve, and shall also be subject to the visitation of the Board of Regents of the State of New York; and also Provided, that if and when such Museums and Libraries respectively, shall cease to be maintained according to the true intent and meaning of this Act such leases, respectively, shall be forfeited, and the sites and buildings thereon erected shall respectively revert to the City of Brooklyn.

Section 3. This Act shall take effect immediately.

The land reserved from sale by the above Act constitutes that portion of the so-called east-side lands that lie south of the Eastern Parkway, and south and east of the Reservoir. The tract contains about forty-five acres on the summit and southern slope of Prospect Hill, and is adjacent to Prospect Park.

The first practical step was, therefore, completed at the close of the year 1888-9, by thus securing legislative provision for a proper site.

# THE YEAR 1889-90.

The next step necessary was the incorporation of an institution whose purposes should be broadly those of the best Museums of Art and Science already in existence, that should have power through its charter of accomplishing its purposes, and that should absorb the old Brooklyn Institute as an organic part of itself.

Accordingly during the autumn of 1889, the Subcommittee on Organization from the Citizens' Committee on Museums held several meetings, and matured plans for a new corporation destined to be known as "The Brooklyn Institute of Arts and Sciences." This plan was presented by the Sub-committee on Organization to the Committee of Citizens late in December, in the form of a proposed charter to be asked from the Legislature of the State. The form of the charter was amended and then approved by the Citizens' Committee, and the Sub-committee was requested to seek the incorporation of the "Brooklyn Institute of Arts and Sciences" under the form of charter as adopted.

The bill to incorporate the new institution was introduced in the Senate by Hon. James W. Birkett, from the Third Senatorial District, and in the Assembly by Hon. George L. Weed, from the Eleventh Assembly District, during the month of February, 1890. The bill was passed by the Legislature on April 14th, and signed by Governor Hill on April 23d, 1890, thereby creating the corporation of The Brooklyn Institute of Arts and Sciences. The bill also authorized the old Brooklyn Institute to transfer its property to the new Institute of Arts and Sciences. A copy of the charter of the new institution is given in the appendix.

On May 1st, 1890, the gentlemen named as incorporators in the Act of Incorporation held a meeting, accepted their Charter, adopted a constitution in pursuance of Section 4 of the Charter, and ordered a meeting of the Board of Trustees named in the Act of Incorporation, to be held on May 10th, for the purpose of organizing the Board, electing officers and adopting By-laws to govern the corporation.

At the meeting of Trustees on May 10th a temporary organization was effected and By-laws were

adopted. The meeting then adjourned until May 17th for the election of officers, and on that date the following officers were chosen: President, Gen. John B. WOODWARD; Vice-Presidents, Rev. RICHARD STORRS, D.D., Hon. JAMES S. T. STRANAHAN and SAMUEL M. MEEKER; Director, Prof. Franklin W. HOOPER; Treasurer, Mr. EDWIN BEERS; Secretary, Prof. Robert Foster, Ph.D. In accepting the Presidency of the corporation, Gen. Woodward thanked the Trustees for the honor conferred upon him, spoke of the value of the work to be undertaken by the new Institute, and announced that he would appoint the committees required by the Constitution at the next meeting of the Board, and also would present a plan for the accomplishment of the purposes of the corporaation for the consideration of the Trustees.

The second meeting of the Trustees was held on Monday, June 23d. At this meeting the Standing Committees appointed by Gen. Woodward were announced, and recommendations for the work of the coming year were presented by President Woodward and adopted.

Thus was brought to a close the second full year of work in behalf of the Museum of Arts and Sciences for Brooklyn. The second step in the accomplishment of the original plans had been successfully taken.

## THE YEAR 1890-91.

During this year the progress of the Museum plans was marked by four events of importance: (1) the enactment by the State Legislature of a law authorizing the City of Brooklyn to erect Museum Buildings

on the Prospect Hill site, at an expense not exceeding \$300,000, as soon as the Endowment Funds of the new Institute should exceed \$200,000, and also authorizing the Mayor and Park Commissioners of the city to lease such Museum Buildings to the new Institute for a term not to exceed one hundred years, at a nominal rent; (2) the sale of the old Institute site in Washington street to the Trustees of the Brooklyn Bridge, for Bridge Extension purposes, for the sum of \$74,000; (3) Subscriptions to the Endowment Fund of the new Institute by a few public spirited citizens, members of the Institute, amounting to \$51,500; and (4) a widespread public interest manifested by the citizens of Brooklyn in the work of the Institute and in the success of the Museum plans.

The bill authorizing the erection of the Museum Building and the lease of it to the new Institute was introduced in the State Senate by the Hon. JAMES W. BIRKETT, Senator from the Third District, and in the Assembly by the Hon, John J. O'Connor, of the Fifth Assembly District, on February 9th, 1891. The bill was passed by the Senate on February 13th, by the Assembly on March 4th, and was signed by the Governor on March 12th. The bill as introduced in the Legislature was approved by the City Government and by the Board of Trustees of the Brooklyn Institute of Arts and Sciences. Several thousand citizens of Brooklyn, representing all sections of the city and every variety of interest, joined in petitioning the Legislature to support the bill. The passage of the bill was by an unanimous vote both in the Senate and the Assembly. The following is a copy of the new law:

An Act to provide for the erection of Museum Buildings on Park lands in the City of Brooklyn, and to authorize leases thereof to the Brooklyn Institute of Arts and Sciences.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The Mayor and the Park Commissioners of the City of Brooklyn are hereby authorized to construct, erect, and maintain on Park lands, bounded by Flatbush avenue, the Eastern Parkway, and Washington avenue, in the City of Brooklyn, a suitable fireproof building, or buildings, for the purpose of establishing and maintaining therein, under proper rules and regulations, to be approved by the said Mayor and Commissioners, Museums of Art and Science, by The Brooklyn Institute of Arts and Sciences, incorporated by Chapter 172 of the laws of eighteen hundred and ninety, at an aggregate cost not exceeding a sum of which the annual interest, at the rate of interest at which a fund or bonds shall be issued, is nine thousand dollars, and the Mayor, Comptroller, and City Clerk of said city are hereby authorized to prepare and issue bonds of the City of Brooklyn, to be known as Museums of Art and Science bonds, signed, sealed, and countersigned in the same manner as other bonds of said city, and bearing interest at a rate not to exceed three per centum per annum, payable semi-annually, to be issued in such form and for such length of time as the said Mayor and Comptroller, in their judgment, may determine; and the said bonds shall be exempt from taxation, and the proceeds received from the sale of said bonds, and all premiums thereon, shall be paid to the City Treasurer of the City of Brooklyn to the credit of a fund, which is hereby created to be known as the Museum of Art and Science Fund, and shall be paid out from time to time as required for the purpose of constructing, erecting, and maintaining said building or buildings upon the requisition of the Mayor and Park Commissioners of said city; but no bonds shall be issued for the erection of said Museum Buildings unless the said Brooklyn Institute of Arts and Sciences shall have duly certified to the said Mayor and Comptroller that the funds of the said Institute in hand and applicable to the support and maintenance of the said Museums and the purposes of its incorporation shall exceed two hundred thousand dollars.

Section 2. The said Mayor and Park Commissioners are hereby authorized and directed, on the erection of said Museum Buildings, to lease the same to the Brooklyn Institute of Arts and Sciences for the purpose of establishing and maintaining therein Museums of Art and Science and carrying out the purposes of said Institute, at a nominal rent and for a term not exceeding one hundred years, and on such other conditions as may be expressed in such leases; and that the said museums and their contents shall be open and accessible to the public, as authorized in Sec. 2, Chap. 372, of the laws of eighteen hundred and eightynine.

Section 3. This act shall take effect immediately.

The sale of the old Institute site in Washington street to the Trustees of the New York and Brooklyn Bridge was effected in July, 1891, through the appraisement of a Commission appointed by the courts. The net proceeds of the sale were \$72,000.

The total invested funds of the old Brooklyn Institute on August 1, 1891, were \$139,406. The subscriptions to the Endowment Fund of the new Institute of Arts and Sciences, on the same date, amounted to \$51,500. The total available funds of the two institutions at the close of the third year's work in behalf of the Museums of Art and Science were \$190,906, or within \$9,094 of the amount required by law before a Museum Building could be erected.

## THE YEAR 1891-92.

During this year \$16,000 were subscribed to the Endowment Fund of the Institute, making the total fund \$206,906, or \$6,906 in excess of the amount required by law before the Museum Building could be erected. The Mayor and Park Commissioner of the city designated as the site of the Museum Building on Prospect Hill that portion of Institute Park that is bounded by the Eastern Parkway on the north, Washington avenue on the east, the south of old President street on the south, and on the west by the Prospect Hill Reservoir lands. The plot is 625 feet in width and 650 feet in length, and comprises about nine and three-fourth acres. It is the most desirable site for a large public building in the city of Brooklyn. A large building located upon the site will be one of the most commanding structures in the State.

## THE YEAR 1892-93.

During this year the Endowment Funds were increased to \$211,906.00; the Charter of the Institute

was amended by an Act of the Legislature which provides that the Mayor, the Comptroller and the Park Commissioner of the City of Brooklyn shall be *exofficio* members of the Corporation and of the Board of Trustees of the Institute; and a most admirable plan and design for the Museum Building was secured through a competition among architects.

The amendment to the Charter was sought by both the Board of Trustees of the Institute and by the Mayor of Brooklyn, on the twofold ground (1) that the Institute is broadly representative of the public interests in the city in educational matters, and (2) that its Museum will be erected on public land and in some measure at public expense. A copy of the Act amending the Charter is given in the Appendix.

The design for the Museum Building, obtained by the competition, commends itself both on account of its beauty and its simplicity. Briefly described, it will be a building containing three stories and a basement, about five hundred and fifty feet square, and provided with four large interior courts. A front elevation of the building above the basement is given on the frontispiece of this volume, and a ground plan on the opposite side of the leaf.

The building will be surrounded by a slope of green about seventy feet in width, and on the south the Museum will overlook Institute Park and Prospect Park, and have an unobstructed view to the east, south and west. On the north the Museum will face the Eastern Parkway, and above the first story have an unobstructed view to the north and west.

The plan of the first or principal floor is as follows:

Through the central axis of the building running north and south and connecting the two main entrances to the building is the great hall of sculpture, divided at the centre by the Memorial Hall, which occupies the centre of the building. The hall of sculpture will celebrate the Art of Sculpture. In the portion north of Memorial Hall will be placed the best representatives of Ancient Sculpture, and in the portion south of Memorial Hall the best representatives of Modern Sculpture. Along the east and west axis of the building will be located, at the east end, the large auditorium for lectures, concerts and anniversary addresses, and at the west end the great exhibition hall for loan collections, the auditorium and exhibition hall being separated at the centre of the building by the Memorial Hall.

The remaining portion of the first floor will be occupied with collections representing the history of Architecture, Sculpture and allied arts. The northeast court, with the galleries adjacent, will be occupied by Chaldæan, Assyrian and Egyptian Art, and by American and Eastern prehistoric Archæology. The northwest court and the adjacent galleries will be devoted to Græco-Roman Art. The southwest court and adjacent galleries will be used for Mediæval Art, including Byzantine, Romanesque and the different developments of Gothic Art. The southeast court and adjacent galleries will contain the history of Modern Art, including the different developments of the Renaissance, Mohammedan Art, Chinese Art, Japanese Art, and Recent Art. Type rooms will be constructed in the four sections of the Museum above mentioned to illustrate each of the great art movements in ancient, Græco-Roman, mediæval and modern times. The four great courts, which will be covered with glass at the roof of the building, will contain the larger objects representing each period.

The large auditorium and the large exhibition hall will each rise through the three stories of the Museum, and have galleries for the second and third floors. The auditorium will be reached mainly from the entrances and porte-cochère on the eastern façade, next to Washington avenue, and the exhibition hall mainly from the western entrance and porte-cochère.

The second floor will be occupied chiefly by the literary and scientific Departments of the Institute. At the centre of the east front will be the lecture room for the Departments of Fine Arts, Philology, Political Science and Law. At the centre of the north front a lecture room for the Departments of Anthropology, Archæology, Geography, Pedagogy and Psychology. At the centre of the southern façade will be a lecture room for the Departments of Geology, Mineralogy, Zoology, Botany, Entomology, and Microscopy. The Departments of Astronomy, Physics and Mathematics will have rooms in the Astronomical Building. The collections of the Departments of Law, Political Science, Geography and Microscopy will occupy the northeast galleries of this floor; the collections in Anthropology, Pedagogy and Psychology, the northwest galleries; the collections in Geology and Mineralogy, the southeast galleries; and the collections in Zoology, Botany and Entomology, the southwest galleries. At the centre of the west façade, and connected with the large exhibition hall, will be the refectory, overlooking the Prospect Hill Reservoir.

The third floor will be occupied by the music room, the general reference library, the galleries for painting, etching and allied arts, and the galleries for domestic art and science. The music room will occupy the centre of the north façade, and open widely into suites of picture galleries to the east and west. The library will occupy the centre of the south front, and open widely into the galleries of the loan collections of paintings and domestic art to the east and west. The northeast galleries will contain historical paintings, and the northwest galleries recent paintings. The southeast galleries will contain loan collections of paintings and historic works in black and white. The southwest galleries will contain recent works in black and white, and collections illustrating domestic art and science.

The central axes of the building will rise one story higher than the outer portions of the building. In this upper story the Department of Engineering will occupy the eastern wing, the Department of Electricity the western wing, the Department of Chemistry the southern wing, the Department of Music the northern wing, and the central portion will contain the Schools of Painting, Sculpture and Architecture, and the Department of Photography.

The main stairways and elevators are on either side of the central axis in the north and south sections of the building. The basement under the entire building will be about nine feet high, and will contain storage rooms, curator's rooms, apparatus for ventilation, together with pipes, tubes and wires connected with heating and lighting. The entire building will be fireproof.

The Memorial Hall will constitute the central and the crowning feature of the building; it will rise from the first floor to the arch of the central dome of the structure.

## THE YEAR OF 1893-94.

During the past season the progress of the Museum movement has been marked by five events of importance: (1) The completion of the plan and design for the Museum Building by the architects, Messrs. McKim, Mead & White, according to the outlines given in the drawings submitted in the original competition, and described on the foregoing pages. The making of detail drawings, plans and specifications for the first section of the Museum to be erected. The lease by the Mayor and Park Commissioner of eleven and nine-tenths acres of land in Institute Park to the Brooklyn Institute of Arts and Sciences, for a term of one hundred years, at one dollar per year, as a site for the Museum building, in accordance with Chapter 372 of the Laws of 1889, the lands being bounded on the north by the Eastern Parkway, on the east by Washington Avenue, on the south by a line 100 feet south of the southerly line of old President Street and parallel thereto, and on the west by the westerly line of Grand Avenue, said line being the easterly boundary of the Reservoir lands on Prospect Hill and in continuation thereof. (4) The passage of a bill by the State Legislature authorizing the city to fill and grade the lands, including the site of the Museum building, at an expense not to exceed \$50,000.00; and (5) an amendment to the law authorizing the city to erect a section of the Museum building, increasing the rate of interest on the Museum of Art and Science bonds to a rate not exceeding 4 per cent. per annum, thereby enabling the city to make a sale of its bonds.

The section of the building which the Trustees recommend to be first erected occupies the wing facing the Eastern Boulevard and Washington avenue, plans for which have been prepared by the architects as stated above. The section is 210 feet in length, 60 feet in average depth and three stories in height. The first is designed for collections in Architecture, Sculpture, Archæology and Ethnology, the second for the scientific collections of the Institute, and the third, which is lighted from the roof only, for collections of paintings, etchings and other works of art in color and in black and white.

The amendment to the law authorizing the city to erect a section of the Museum building was passed in April, signed by the Governor on May 6th, 1894, and is as follows:

CHAPTER 577, LAWS OF 1894.

An Act to amend chapter eighty-nine of the laws of eighteen hundred and ninety-one, entitled "An act to provide for the erection of museum buildings on park lands in the city of Brooklyn, and to authorize leases thereof to the Brooklyn Institute of Arts and Sciences."

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section one of chapter eighty-nine of the laws of eighteen hundred and ninety-one, entitled

"An act to provide for the erection of museum buildings on park lands in the city of Brooklyn, and to authorize leases thereof to the Brooklyn Institute of Arts and Sciences," is hereby amended so as to read as follows:

SEC. 1. The mayor and the park commissioner of the city of Brooklyn are hereby authorized to construct, erect and maintain on park lands, bounded by Flatbush avenue, the eastern parkway and Washington avenue, in the city of Brooklyn, a suitable fireproof building or buildings, for the purpose of establishing and maintaining therein, under proper rules and regulations, to be approved by the said mayor and commissioner, museums of art and science, by the Brooklyn Institute of Arts and Sciences, incorporated by chapter one hundred and seventy-two of the laws of eighteen hundred and ninety, at an aggregate cost not exceeding a sum of which the annual interest, at the rate of interest at which a fund or bonds shall be issued, is twelve thousand dollars, and the mayor, comptroller and city clerk of said city are authorized to prepare and issue bonds of the city of Brooklyn, to be known as museums of art and science bonds, signed, sealed and countersigned in the same manner as other bonds of said city, and bearing interest at a rate not to exceed four per centum per annum, payable semiannually, to be issued in such form and for such length of time as the said mayor and comptroller, in their judgment, may determine, and the said bonds shall be exempt from taxation, and the proceeds received from the sale of said bonds and all premiums thereon shall be paid to the city treasurer of the city of Brooklyn to

the credit of a fund which is hereby created, to be known as the museum of art and science fund, and shall be paid out from time to time, as required for the purpose of constructing, erecting and maintaining said building or buildings, upon the requisition of the mayor and park commissioner of said city; but no bonds shall be issued for the erection of said museum building unless the said Brooklyn Institute of Arts and Sciences shall have duly certified to the said mayor and comptroller that the funds of the said institute in hand and applicable to the support and maintenance of the said museums and the purposes of its incorporation shall exceed two hundred thousand dollars.

Sec. 2. All acts and parts of acts inconsistent with this act are hereby repealed.

SEC. 3. This act shall take effect immediately.

It will thus be seen that everything has been done that can be done by the Trustees and all interested in the establishment of the Museum. It now remains for the city to sell its bonds and begin work on the building.

### THE BEDFORD PARK BUILDING.

During the summer of 1883 the Committee on Scientific Museum, Mr. Eugene G. Blackford, Chairman, leased, under the authority of the Board of Trustees, from the Hon. George V. Brower, Park Commissioner of the City of Brooklyn, the large Building situated in Bedford Park, between Prospect and Park Places, facing Brooklyn Avenue, in the 24th Ward of the city, at a nominal rent, and for a term of years, or until the Museum Building in the Institute Park shall have been erected.

The Bedford Park Building comprises two stories and a basement, 50x70 feet on the ground, and contains a large number of rooms adapted to the exhibition of the collections of the Scientific Departments. These rooms were apportioned to the several Departments having collections, on recommendation of the Council, by the Board of Trustees.

On the first floor, the two large rooms on the west side were assigned to the Departments of Zoölogy and Entomology; the two rooms in the north wing, to the Department of Mineralogy; the two rooms on the east side, to the Departments of Archæology and Geology respectively; and the three rooms in the south wing, to the Department of Geography. On the second floor, two rooms were assigned, on the west side, to the Department of Botany, two rooms on the east to the Department of Pedagogy, and two rooms on the south to the Departments of Physics, Chemistry and Microscopy.

During the summer and autumn of 1893 the several Departments were busy in arranging their collections in the rooms assigned them. The Department of Geography has so placed its large and valuable collection of maps, reliefs, globes, atlases, and reference books in geography, that any one of the 1,500 items in the catalogue may be easily obtained for reference or study. A large number of the maps have been attached to rollers, which are placed in racks over the entire ceiling of the largest of the exhibition rooms. These maps are so numbered and catalogued that a visitor may readily pull any one of them into position for study. The Department of Entomology has placed the cases containing the Meyer collection so that any portion of the collection may be easily consulted. The Calverley collection of Lepidoptera has also been placed in cases. The remaining Entomological collections have not as yet been arranged for exhibition purposes.

The Department of Zoölogy has brought together a large collection in Conchology, presented to the City of Brooklyn by the late Claudius B. Nichols; the collection of birds, made by the late Dr. Aten, of Brooklyn; the collections of coral, presented by Prof. Franklin W. Hooper; the Brainerd collection of birds, presented by the Misses Brainerd, of Brooklyn; a collection of fishes and reptiles, presented by Mr. Eugene G. Blackford; a collection of skeletons of vertebrates, presented by Prof. Franklin W. Hooper, together with other collections that have been long in the possession of the Institute. The rooms of the Department of Zoölogy are particularly attractive to students of Natural History. A special effort has been made by the Department of Zoölogy to encourage

the study of the local fauna. A collection of shells of Long Island has been placed in a case by itself. The Section on Ornithology of the Department of Zoölogy has made several valuable additions to the collection, and Mr. Arthur H. Howell has deposited his collection in the Museum Building for temporary exhibition.

The Department of Mineralogy has placed on exhibition the Braun collection of Long Island rocks and minerals, the old Institute collection of minerals and rocks, the Daniel S. Martin collection of minerals and rocks of Manhattan Island, and the collections recently presented by Prof. Franklin W. Hooper. Several members of the Department of Mineralogy have made valuable additions to the collections during the past year.

The Geological Department has placed on exhibition the following collections: (1) A series of rocks representing the geology of Long Island, (2) a series of igneous rocks, loaned by the Pratt Institute, (3) the Daniel S. Martin collection of fossils, and (4) the collection owned by the Institute previous to the destruction of its building on Washington Street. The Archæological collections have not as yet been placed on exhibition,

The Department of Botany has arranged in cases specially constructed to hold its Herbarium, the Calverley collection of flowering plants, the E. S. Miller collection of the plants of Long Island, and the collections made by the Department of Botany. The Department of Pedagogy has brought together a considerable library of pedagogical literature, and in its room may be found about 3,000 volumes of works that

may be used for reference by those who visit the Museum Building. In the room assigned to the Departments of Chemistry, Physics and Microscopy, the apparatus and collections of those Departments have been placed in cases.

The library of the late Dr. Frederick A. Farley, recently presented to the Institute by generous and public spirited citizens of Brooklyn, has been placed in cases in the broad hall on the first floor of the building. This library, to be used only for reference, will be placed in the new Museum Building in an alcove by itself, and will be known as the Frederick A. Farley Library. Each Department having collections in the building has also provided itself with a series of textbooks and reference books relating to the science which it represents. The library of the Department of Entomology is large and particularly valuable.

Several courses of lectures were given at the Bedford Park Building during the past year on subjects that could be illustrated from the collections. The Department of Astronomy held a series of meetings at the Building for the purpose of studying the constellations.

The building was leased by the city of Brooklyn at a nominal rent and on condition that the collections should be open to the public in accordance with rules established by the Department of Parks. During the past year the building has been open each week-day to those who wished to make a study of some portion of the collections, and has been open on Saturday afternoons to every one who wished to visit the Museum. During the coming year it is expected that the building will be open to the public several afternoons in the week.

## TREASURER'S ANNUAL REPORT.

The Annual Report of the Treasurer of the Institute, Mr. Eugene G. Blackford, covers the current receipts and expenses for the year ending May 1st, 1894. A summary of the report is as follows:

#### RECEIPTS.

Cash on hand May 1st, 1893	\$7,185	88
Subscriptions to the Endowment Fund	8,240	00
Initiation Fees	2,630	00
Interest on Endowment Funds	6,498	50
From Annual dues, courses of instruction, etc	31,040	85
Total	\$55,595	23
EXPENSES.		
Investment in bond and mortgage	\$10,000	00
Lectures, concerts, printing, postage, etc	31,348	47
Cash advanced to Treasurer of Associate Fund	2,068	46
Rentals, insurance and Museum expenses	5,318	81
Salaries	4,800	00
Sunday evening lecture expenses	550	00
Cash on hand May 1st, 1894	1,509	49
Total	\$55,505	23

The President, Secretary and Director submitted annual reports on the work and needs of the Institute, large portions of which are included in the foregoing accounts of the work of the year.

# FORMS OF SUBSCRIPTION AND BEQUEST.

I hereby subscribe to the Endowment Fund of the
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Dollars, to be applied to the Endowment Fund of said
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## APPENDIX.

### CHARTER

OF

# THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES.

INCORPORATED APRIL 23D, 1890.



### THE CHARTER.

CHAPTER 172, LAWS OF 1890.

AN ACT to incorporate the Brooklyn Institute of Arts and Sciences, and to authorize the Brooklyn Institute to assign and convey its property thereto.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section I. Lyman Abbott, Abram Abraham, John P. Adams, Truman J. Backus, Andrew D. Baird, Charles R. Baker, Richard S. Barnes, Thomas T. Barr, Henry Batterman, Edwin Beers, William Berri, Adolphus J. F. Behrends, Eugene G. Blackford, Samuel W. Boocock, David A. Boody, Richard R. Bowker, Joseph E. Brown, Walter S. Carter, John W. Chadwick, Leander T. Chamberlain, Henry T. Chapman, Ir., Christian T. Christensen, Alfred F. Cross, John Claffin, David H. Cochran, William J. Coombs, Edgar M. Cullen, William Dick, Carll H. De Silver, Samuel B. Duryea, Conrad V. Dykeman, Charles F. Erhardt, Joseph Fahys, Robert Foster, Isaac H. Frothingham, Bernard Gallagher, William J. Gaynor, Howard Gibb, William Hamilton Gibson, Robinson Gill, John Good, Frederick A. Guild, Charles H. Hall, Theodore A. Havemeyer, William H. Hazzard, A. Augustus Healy. Joseph C. Hendrix, Henry Hentz, Warren E. Hill, Cornelius N. Hoagland, Joseph C. Hoagland, Franklin W. Hooper, Edward I. Horsman, David H. Houghta-

ling, Mark Hoyt, Henry C. Hulbert, William H. Husted. William M. Ingraham, Darwin R. James, John S. James, James Jourdan, William B. Kendall, Joseph F. Knapp, William Lamb, John Loughran, William B. Leonard, Elias Lewis, Jr., Edward H. Litchfield, Arthur Littlejohn, Gustav Loeser, Abbott A. Low, Seth Low, David C. Lyall, Edward H. R. Lyman, William H. Lyon, William H. Male, Henry W. Maxwell, J. Rogers Maxwell, William H. Maxwell, Moses May, James McMahon, Peter H. McNulty, Samuel M. Meeker, Richard R. Meredith, Edward Merritt, Edward L. Molineaux, Leonard Moody, Charles A. Moore, Henry P. Morgan, William H. Murtha, Albro J. Newton, William H. Nichols, James S. Noyes, George M. Olcott, Alexander E. Orr. Andrew Otterson, Edwin Packard, Lowell M. Palmer, Henry L. Palmer, Calvin Patterson, Albert C. Perkins, Bernard Peters, Henry E. Pierrepont, Norton Q. Pope, William Potts, Alfred J. Pouch, Rossiter W. Raymond, Ripley Ropes, Charles Rumpf, William Cary Sanger, Charles A. Schieren, Frederick A. Schroeder, John E. Searles, Ir., Edward A. Seccomb, Thomas G. Shearman, Henry K. Sheldon, Edward M. Shepard, Crawford C. Smith, Bryan H. Smith, Millard F. Smith, Theodore E. Smith, S. Warren Sneden, Edward R. Squibb, Frank Squier, Thomas E. Stillman, Richard S. Storrs, James S. T. Stranahan, William H. Taylor, John Truslow, Joshua M. Van Cott, William H. Wallace, Adam D. Wheelock, Charles E. West, William R. Webster, George W. White, Stephen V. White, Cornelius D. Wood, Charles L. Woodbridge, Robert B. Woodward, John B. Woodward, William Ziegler, and such other persons as are now or may hereafter be associated with them and their successors, are hereby created a body corporate under the name of The Brooklyn Institute of Arts and Sciences, to be located in the city of Brooklyn.

- SEC. 2. The purposes of said Corporation shall be the establishment and maintenance of museums and libraries of art and science, the encouragement of the study of the arts and sciences, and their application to the practical wants of man, the advancement of knowledge in science and art, and in general to provide the means for popular instruction and enjoyment through its collections, libraries and lectures.
- SEC. 3. The museums and libraries of said Corporation shall be open and free to the public and private schools of said city at all reasonable times, and open to the general public on such terms of admission as shall be approved by the Mayor and Park Commissioner of said city.
- Sec. 4. Said Corporation shall have power to make and adopt a constitution and by-laws for the government of the Corporation, and for the regulation of the membership of the said Institute of Arts and Sciences, and further, shall have power to make such rules and regulations as may be necessary for the safe-keeping and proper use of its property.
- Sec. 5. Abram Abraham, John P. Adams, Charles R. Baker, Thomas T. Barr, Henry Batterman, Edwin Beers, Adolphus J. F. Behrends, Eugene G. Blackford, David A. Boody, Richard R. Bowker, Leander T. Chamberlain, John Claffin, William J. Coombs, Carll H. De Silver, William Dick, Joseph Fahys, Robert Foster,

Howard Gibb, John Good, Charles H. Hall, Joseph C. Hendrix, Joseph C. Hoagland, Franklin W. Hooper, David H. Houghtaling, Mark Hoyt, William H. Husted. John S. James, Joseph F. Knapp, John Loughran, Henry W. Maxwell, Moses May, James McMahon, Samuel M. Meeker, Leonard Moody, Charles A. Moore, William H. Nichols, George M. Olcott, Alexander E. Orr, William Potts, Charles Rumpf, William Cary Sanger, Charles A. Schieren, Frederick A. Schroeder, John E. Searles, Jr., Henry K. Sheldon, Theodore E. Smith, Thomas E. Stillman, Richard S. Storrs, Joshua M. Van Cott, John B. Woodward, shall be, and hereby are declared to be the Trustees of said Corporation, until their successors shall be elected, pursuant to such constitution and by-laws as the Corporation may adopt. Fifteen trustees shall constitute a quorum for the transaction of business.

- SEC. 6. Said Corporation may take and hold by purchase, grant, lease, gift, devise or bequest real or personal property, necessary or proper for the purposes of its incorporation, provided the annual income of all property held or owned by said Corporation shall not exceed two hundred thousand dollars.
- Sec. 7. Said Corporation shall possess the general powers and privileges and shall be subject to the general restrictions and liabilities prescribed in the third title of the eighteenth chapter of the first part of the revised statutes, and to the provisions of chapter three hundred and sixty of the laws of eighteen hundred and sixty, relating to wills.
- SEC. 8. The Brooklyn Institute, and its Trustees and Board of Directors, are hereby authorized to assign

and convey to the Brooklyn Institute of Arts and Sciences all the property, real and personal, owned and held by it, and the said property when so transferred to, shall vest in and be held and used by the said Institute of Arts and Sciences, for the uses and purposes set forth in section two of chapter three hundred and forty-three of the laws of eighteen hundred and sixtytwo, in the following words: "The purposes of the said incorporation shall be the continuing of the library, collecting and forming a repository of books, maps, pictures, drawing apparatus, models of machinery, tools and implements generally, for enlarging the knowledge of literature, science and art, and thereby improving the conditions of mechanics, manufacturers, artisans and others." The said Institute of Arts and Sciences shall hold, invest and use all trust funds so transferred to it, in conformity with the trusts on which they were received and held by the Brooklyn Institute. the transfer of its property as hereby authorized shall be completed, and an affidavit in verification thereof, made by the president of the Board of Directors, and sworn to before any judge of the supreme court residing in the city of Brooklyn, shall be filed in the office of the secretary of state, the corporate existence of the said Brooklyn Institute shall cease, and the several acts relating thereto shall be of no further effect.

SEC. 9. This act shall take effect immediately.

### AMENDMENT TO THE CHARTER.

CHAPTER 579, LAWS OF 1893.

AN ACT to amend Section five of Chapter one hundred and seventy-two of the Laws of eighteen hundred and ninety, relating to the Brooklyn Institute of Arts and Sciences.

Approved by the Governor May 5, 1893. Passed; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section five of chapter one hundred and seventy-two of the laws of eighteen hundred and ninety, entitled "An Act to Incorporate the Brooklyn Institute of Arts and Sciences, and to authorize the Brooklyn Institute to assign and convey its property thereto," is hereby amended by adding at the end of said section the words, the Mayor, Comptroller and Park Commissioner of the City of Brooklyn shall be ex-officio members of the Board of Trustees of said corporation.

 $S_{EC.}$  2. All acts and parts of acts inconsistent with this act are hereby repealed.

SEC. 3. This Act shall take effect immediately.

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One five-foot gas burner consumes as much oxygen as nine people.

One five-foot gas burner consumes as much oxygen as nine people. Human life cannot exist without oxygen, and our health depends on the purity of that which we draw into our lungs with every breath. In this climate, where weather necessitates closed doors and windows at the season climate, where weather necessitates closed doors and windows at the season when lights are longest burned, the question of pure air in our homes, warehouses, shops and offices is of paramount importance. A five-foot gas burner consumes as much oxygen as nine adults. Think of thirty-six people sitting in a dining room for hours together, and you can form an idea of the vitiation of the atmosphere caused by the burning of only four gas jets! The Edison light gives off comparatively no heat, does not vitiate the air, and, though bright and clear, is not injurious to the eyes. For these reasons, apart from others, it is the healthiest method of lighting known. It is also more economical than gas, candles or kerosene.

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There is no need for matches—a dangerous factor—and the system of switches is a luxury. We enter the door, turn a switch close at hand, and the hall is lighted; another, switch at the parlor door controls the chandelier;

switches is a luxury. We enter the door, turn a switch close at hand, and the hall is lighted; another switch at the parlor door controls the chandelier; the dining room is lighted in the same convenient manner, and from the dining room the kitchen lamp is controlled. A switch at the head of the stairway lights the cellar, and enables one to go into the coal vaults without a candle. The lamp over the porch casts confusion on the trespasser and light on his doings, serving as a protection. Wishing to go upstairs, we turn the key of a switch which lights the lamp in the second story hall, and at the landing we put out the lamp below by a second switch. In each bedroom hangs a switch; press the button, and the room is lighted. We hang the switch on a brass hook on the head board, and it is in easy reach from the bedready for use at any time of night.

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